

Archive

The Subscription Magazine for Acorn Users

£2.50

May 1995

Vol. 8 N° 8

MAY
'95

Acorn & the Internet

OnLine Media

Text Import and all that...

Non-Designer's Design Book

♦ **Special Reader Offer** ♦

Datapower - £55 off! (page 5)

Reviews: CASA-II and CASA-III, Chess II, GameOn!, HolyBible, HP Laserjet 4P, Lottery Software, Map Importer, Personal Accounts, TableMate 2, Textease, Voyage of Discovery, Wolfenstein. ♦

ncs 

NORWICH COMPUTER SERVICES

The book that changed my life

No, this is not a sneaky infiltration of the God-slot – I'm talking about Robin Williams' Non-Designer's Design Book. I use DTP a great deal but, like many people, have never had any training. I read Rob Pickering's book that came with Impression and that taught me a few very basic things – but that was it.

Robin Williams' book has given me some basic design and typography tools to enable me to start *thinking* about DTP rather than just doing it. As you can see, I have changed the layout of Archive somewhat as a result of reading the book. What do you think of the result? Is it any better? (*See page 25 for more details.*)

NCS – still short-handed

Andrew and Sue are doing a wonderful job having taken over from Vera and Amanda but I still haven't been able to replace David. If anyone knows of a good, keen (young?) person who knows about Acorn computers *and* can communicate effectively with human beings(!), please let me know. Norwich is a fine city and we're a happy team (most of the time!). If you're interested, send me a CV.

Special offers policy

Have you ever wondered about our special offers that are linked in to reviews? Could the 'reviews' be little more than 'advertorial'? In the current moral climate in the UK, you could be forgiven for being suspicious. However, as some of you may have noticed, we do try to maintain a high moral standard at NCS. Besides, we have a better plan... ..when we receive a glowing review about a particular product, we contact the supplier to see if we can arrange a special offer. That way, there's a much higher probability that those who take up the offer will get a product that is, actually, worth the money. Then, next time we make a special offer, they will be more likely to trust us and part with some more of their hard-earned cash.

This month we have a good price on the new budget DTP package, Textease. The review (page 43) says it is good value for money anyway. Also, we have an *excellent* offer on Datapower – £55 off the r.r.p. and we also still have one month to run on the Personal Accounts offer. (Update review on page 61.)

That's it for now. Happy reading!

Paul Beverley

Government Health Warning – Reading this could seriously effect your spiritual health

Last week, I had a couple of dreams in which I was deliberately doing something I knew was wrong – I can't remember the details but, after the second one, I woke at 5 a.m. and thought, "I wonder if God is trying to tell me something?" As I lay there, it didn't take me long to work out what I thought it might be.

When the Risc PC first came out, Acorn sent us one of their 'loan machines' for review purposes. When we had finished with it, someone at Acorn said it would be collected. It stood, in its box, by the door for some months. I reminded them about it a couple of times but still no-one came. "Well, there's no point in it sitting there by the door, doing nothing." I reasoned. So, for the last few months, I have been using it in the office to produce the magazine – indeed, I'm typing this piece on it now!

However, I decided that what I was doing was, effectively, stealing and so, the same day, I rang Acorn to 'confess' and offered to buy it off them. After I had done that, I felt such a sense of joy and relief that I was sure that it really had been God's prompting through those two dreams.

Now, March had been a pretty duff month for sales – we were well below our targets. That same day, I made three sales – two big Risc PC systems and two A4000s to a school. Coincidence? Yes, probably, but as there's no way I can be sure, I know what I'll do next time I think God might be prompting me!

P.B.

Archive

The Subscription Magazine for Acorn Users

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Products Available

Acorn Replay Starter Kit – Not really a new product, but new to Archive is this package from Acorn. It includes a CD containing sample videos, stills and examples of multimedia applications, plus AREncode which allows you to compress your own films or add/change the accompanying soundtracks. There are also two manuals: the user guide, which has details of the software supplied, and 'A Guide to Desktop Multimedia' with advice on creating your own multimedia applications, shooting video, locating material as well as tips on layout and style, etc.

Archive BBS closing – Sadly, we have decided that we cannot justify the cost of keeping the Archive BBS running for the very few people who are using it. If you want to send messages to us, leave articles, small ads, etc, then please either use email (PBeverley@arcade.demon.co.uk) or log onto Arcade BBS (0181-654-2212 – user number 21) which Paul accesses a couple of times a week or Archiboard Central (01603-744231) which, if people use it, I will also check reasonably regularly. Keith Marlow has also kindly agreed to put the Archive Monthly Disks on Archiboard Central. So if you need anything in a hurry, give Archiboard a ring on 01603-744231.

AVP Picturebase CDs – This range of multimedia resources has been enlarged to cover additional topics. Each disk, containing video, sound

images and text is controlled by database software, allowing the user to customise their own encyclopedia. Grouped appropriately for National Curriculum use, disks currently available are Britain Since 1930, Victorian Britain, The Era of the Second World War, The First World War and its Consequences, English Architecture, World Habitats, UK Habitats, Expansion, Trade and Industry, Earth and Atmosphere which are all £99 +VAT for a single user copy (£115 through Archive). Also, there are two art-based disks, Art in the National Curriculum and Impressionism up to the Twentieth Century which are available at £75 +VAT for a single user copy (£86 through Archive).

Buttons – A simple application launcher and hard disk protection system for classroom use. It has a window which opens when the machine starts up, before any other windows. Listed in the window are the applications necessary; single clicking will load the task. Other actions can also be linked, so the same click could, for example, also load the printer driver and open a work directory. The hard drive is protected by either removing the hard drive icon or limiting its use (for example, it could open the work directory rather than the disk root). Other areas of the hard disk are only accessible via Buttons, so that hidden applications can be loaded. The price is £24.95 +VAT for a single user licence and £75 +VAT for a site licence, from Lindis International.

Archive Monthly Disk

- ◆ Files from Keith Hodge's Risc PC Column – page 53.
- ◆ Risc PC games compatibility list from Dave Floyd – page 57.
- ◆ PhoneDay-ready STD applications from Jim Nottingham – page 67.
- ◆ Two character-selecting applications from Jim Nottingham – page 64.
- ◆ Lottery program from Apricote Studios reviewed by Colin Singleton – page 71.
- ◆ Sample program from Matthew Hunter's Programming Workshop – page 69.
- ◆ Egyptian fractions from Colin Singleton's Puzzle Corner – page 30.

CD-Circle – Last month we had a review of CD-Circle (p68) but we didn't give the address of the producers, Desktop Laminations. We have corrected that in this month's Factfile at the back of the magazine.

CD drivers – VTI have released four drivers for SCSI and IDE drives – Sony CDU55-S and CDU-55E, Toshiba 3401, 5201 and 4101, NEC SCSI drives and Wearnes CDD-120 series (IDE drives). The drivers cost £19 +VAT each from VTI.

ClassRom upgrade – Oak Solutions' ClassRom products are now supplied by Network Solutions, who have announced the upgrade to version 1.28. Additional features are CMOS RAM protection and restoration (also prevents factory resets), optional machine protection via password, two physical drives can now be seen as two

ClassRom partitions, as well as being able to partition single drives. Support for the Risc PC is now also available. Existing ClassRom cards can be upgraded for £15 +VAT. The upgrade consists of a new EPROM, updated ClassRom software and manual. The upgrade is also available for Oak Ethernet cards (ClassNet).

Cross Stitch – iSV Products has launched XStitch, a cross stitch design package for RISC OS. Any sprite can be used as input, to produce a full cross stitch pattern, using up to 64 colours from 512 named industry-standard thread colours. The design can be saved as a drawfile for importing into DTP packages, as a colour or black and white design. A wide variety of materials are supported, automatic conversion of sprite colours to named colours, automatic calculation of finished design size, definable background colour and over 10,000

Charity Bring & Buy Sale

Come to the **Acorn User Show** in Harrogate and bring your old Beeb/Archimedes software, hardware, computers, monitors, books – anything that you think someone else might possibly want to buy.

◆ **Sponsored by Acorn User and Archive Magazine** ◆

◆ **Acorn User Show, Harrogate – 6/7th May** ◆

◆ **If you can't come, send bits direct to NCS (by 3rd May, please)** ◆

◆ **In aid of Henshaw's School for the Blind, Harrogate** ◆

Help!!!

Can you come and help us on the stand? We need help – taking delivery of what people bring, putting prices on them and selling them to others. David Holden will be there as the main organiser of the stand but he will need help for the two days. If you can help, ring/fax/email us and let us know when you can help. I think it will be good fun for all concerned and it will be doing something to help those less fortunate than ourselves. Thank you!

APDL – PD software

At the show, David Holden will also have his full range of APDL public domain software available, so pop along to the Archive Charity stand and see if there is anything you need there.

stitches per pattern. The price is £21.50 including p&p from iSV or £20 through Archive.

Cumana Bravo – This CD drive comes in two variants – the first connects via the computer's bi-directional parallel port and is therefore not suitable for the A3xx/4xx/5xx or the A3000. The second uses an SLCD interface available as a standard podule or an SLCD upgrade for an EMU interface card. The drive is a double speed, draw loading device and has a built-in audio mixer so that the computer and CD sound are combined, so both are available through the same headphones or speakers without needing to swap cables. Either type costs £254.47 +VAT + p&p or £300 through Archive. If you do not have an EMU card fitted to your machine, the drive, EMU board and EMU upgrade will cost £297 +VAT + p&p or £350 through Archive.

Cumana Indigo – The Indigo CD drive is an internal drive for the Risc PC. The 300iA is supplied with an IDE interface and therefore does not need an additional interface. It is also supplied with an audio mixing board to allow computer and CD sound to be merged. The cost is now £211.91 +VAT + p&p or £250 through Archive.

(There is a problem here in that the board requires the same sound connection on the pcb as the Acorn/ESP 16-bit sound upgrade. If you want to use both, you will need a small adaptor board for which Cumana are charging £10 +VAT, although, it is possible that they may be supplied f.o.c. with the drive if you need it.)

Cumana Oscar – The Oscar CD drive is an external, double-speed device which connects to the computer's bi-directional parallel port (so it is only suitable for use with the Risc PC, A5000, A3010, A3020, A4000 and A4 models). A second CD drive or a printer can be daisy-chained via a through-connector, so you do not lose use of the parallel port. The price is £211.91 +VAT + p&p, or £250 through Archive.

Cumana Victor – These CD drives require a SCSI interface to work, and there are a large number of options available. Stand-alone drives start at £299 +VAT + p&p. Auto-changer drives are also

available with double and quad-speed 6-disk versions as well as an 18-disk quad-speed drive. For situations where the time taken to change between disks is unacceptable (for example, on a network) multi-drive units are available with six separate mechanisms.

Cumana SCSI cards – The price of the Cumana SCSI cards has now dropped. The SCSI II card is now £169.36 +VAT + p&p or £200 through Archive. (Remember that you need the SCSI II cable if you wish to attach external devices – £27 through Archive.) The original SCSI I podule is now £84.26 +VAT + p&p from Cumana.

Datsafe Tapestreamer – i³ have released a tapestreamer package, which includes software for backing up over networks for both Acorn and PC machines. The system needs a bi-directional parallel port, so you do not need a SCSI card (although you will need a A3010, A3020, A4000, A5000, A4 or a Risc PC). Software is supplied for both Acorn and PC compatible systems so dual platform schools do not need to buy a backup system for both machines. The price is £430 + p&p +VAT or £505 through Archive.

DMI / PowerWAVE – Audio Dynamics have a new range of audio cards. The DMI (Dual MIDI Interface) card has two independent Midi interfaces (each with an in and out connection) The PowerWAVE board is an upgrade to the DMI cards and contains a 32 channel Ensoniq general Midi synthesizer with 128 instrument and 49 percussion sounds, removing the need to have external sound modules. The 30 range are for computers with a mini-expansion card (A3000, A3010, A3020, A4000), the DMI 30 card is £74 +VAT or £85 through Archive, the PowerWAVE 30 is £182.97 +VAT or £215 through Archive. The 50 range will be for computers with a standard size podule, and have the added benefit of an optional 16-bit sampler port on the same card, and should be available shortly – prices will be announced. Or, to save the complication(!) order them from Archive for £36, £40 and £36 respectively.

Droom Trilogy – This set of educational adventure games from Resource has been upgraded with music, enhanced graphics and easier to read

◆ Archive Special Offers ◆



Datapower Database

- ◆ After the good review which Datapower received (8.6. p43), we have arranged a special offer price with Iota. The full price is £149 +VAT = **£175.08**, the normal Archive price is £160, but **for one month**, it is on special offer at **£120** – an excellent saving! ◆

"My final choice is Datapower. Whilst I dislike the copy protection method used (at least it is not as bad as Squirrel's), and although it is not a relational database, I found the lookup facility was adequate for my needs. The design process, reporting facilities and general look and feel of the program were such that I found myself turning more and more to this package as the review period went by. You will not be disappointed if you follow my example and purchase this program for your computer. Simon Coulthurst."

Textease

- ◆ We've also managed to arrange a special limited offer on Textease, the **budget DTP** package. Once again, the review (see page 43) was very positive.

The full price is **£39.50** but for two months, it is on special offer at **£35**. ◆

Personal Accounts v3

- ◆ The full price of Personal Accounts is **£49.95** and the special price (for Archive subscribers only) is **£35**. The only difference with this special version is that, to save costs, it will not come in a presentation case. The offer lasts for one more month, i.e. until the June issue of Archive is sent out from NCS (mid May). To take advantage of this offer, just send in your order for Personal Accounts to NCS in the normal way but simply do so at £35 instead of £49.95. ◆

text, and all three titles will run on the Risc PC. The characters in the games pose various problems for the pupils to solve, particular emphasis being placed on developing skills in mathematics and logical thinking. The games are Dragon Droom (£30), Dragon Droom's Revenge (£34) and StarDust (£30). Upgrades from an earlier version, £10 per package. Primary and Secondary site licences are also available. To those prices, add VAT and 4% of the order price for p&p – minimum £1.50.

Eesox Gold CD drive – Eesox can no longer get the style of CD drive they were using as their Gold drive and have replaced it with a caddy-less drive. This means that you cannot use it in the "tower" mode. However, it is faster – 4.4 speed with an access time of 150ms compared with 4 speed and an access time of 225ms. The price is unchanged at £360 inclusive for an internal (Risc PC) drive and £440 for an external drive through Archive.

Full-colour poster printing – Acorn have added an A0 colour poster printer to its range of pre-press products – the NovaJET III large-format inkjet printer. Acorn has combined its Risc PC-based Publishing System with the NovaJET III to provide the Acorn Poster Publisher, a complete poster creation and printing system for “under £11,000”.

The NovaJET uses European standard CMYK inks, operates at 300x300 dpi and is suitable for producing everything from simple text and line art to colour proofs, graphic design visuals as well as short-run, full-colour posters up to A0. Acorn have specifically developed one of the standard Risc PC printer drivers to increase the speed and enhance the colour calibration for the NovaJET III.

The system will be targeted at large retailers, corporate publishers, quick printers and commercial printers. In addition to marketing the complete solution, Acorn will offer individual printers to existing Acorn users. So, if you already have a Risc PC and would like a 14Mb NovaJET III printer plus driver, we can sell you one through Archive. The cost would be about £7,500 + VAT. Let me know if you are interested!

Acorn's press release says that “initial tests with Risc PC have shown significant improvements in both speed and quality compared to the results achieved when the NovaJET is driven by a Mac or PC” and talks about “photographic quality images”. Having seen the output, I would agree and can say that it is nothing less than stunning. I'll bet it eats up the ink but that will be nothing compared to the cost of getting posters printed commercially. To give an example of the speed, the NovaJET can produce an A1-format, photographic quality poster in approximately 20 minutes.

This is actually a very significant announcement because it is another example of something you can do on Acorn machines that can't be matched on other platforms, i.e. it's an example where someone would buy a Risc PC in order to run the application.

If you want to run one of these printers to use with a Mac or a PC, you would need to have a separate computer entirely dedicated to driving the printer (probably a Pentium or a 'Big Mac' of some sort) so

the cost of that would probably be £15–16,000. Also, you would have to use networking to throw PostScript at it from your separate design station. This means that, to run it, you need (a) about twice as much money as using an Acorn and (b) someone with networking expertise because the task, even in networking terms, is not a simple one. With the Acorn solution, the printer is (almost) just like any other printer attached to your workstation computer – there's no need to have someone with specialist knowledge of networking and/or PostScript to run it.

I say “almost” because there is the issue of colour calibration. The resultant colour does depend to a great extent on the type and quality of paper used. Acorn provide preset calibration files for a number of standard types of paper but if you choose to use different paper, you will need to go through a calibration procedure.

For further information, please contact Simon Woodward, Publishing Manager at Acorn Computers on 01223-254460.

Hazelnut CD – Hazelnut have released a CD which includes all three of their multimedia learning packages. Times Tables: 12 disks covering 2x to 12x tables, 132 different animations, text and sound (disk price £30); Number Bonds, £15 – three disks covering addition and subtraction bonds up to 10, plus two worksheets (disk price £15 for all three, or £5 each); and a new release, Tell Time with four disks covering hours, half-past and quarters (disk price £20). Any of the above can be bought as separate packages (add £2.50 p&p) or all three on one CD costs £50 + £1.50 p&p. (No VAT as Hazelnut are not VAT registered.)

Lambda 16 – The Irlam 16-bit sound sampler/player on a standard expansion card. The included software controls the settings for the card, and sampling is via a simple-to-use tape recorder-style interface. The card has stereo line-in phono connectors, 3.5mm Mic, 16-bit stereo line-out (3.5mm jack), variable input gain and line-out volume. Stereo and mono file formats are supported, in 16 or 8-bit, from a wide range of sampling rates, from 5.51kHz to 48.0kHz. It integrates the standard sound system, allowing the computer's sound to be sampled or the 16-bit and VIDC outputs to be

mixed. The introductory price, including expansion card and sampling software, lead and manual, is £99 + £3.50 p&p + VAT or £118 through Archive. Tsunami, the sound editing software, is not yet ready, but when it is, a joint package will be available for £159 + p&p + VAT (standard Tsunami price will be £99 + p&p + VAT). The samples created can, however, be edited using other packages such as !AudioWorks in the meantime.

Landmarks: PinPoint data file

Ancient Civilisations – Information in this datafile covers eleven civilisations, such as the Egyptians, Aztecs and the Romans. A number of activity sheets are included, focusing on historical and geographical aspects, covering river valleys, landmarks, leaders, Egyptian writing and numbers, beliefs and customs, and also a quiz. To use the data, you will need either Junior PinPoint or PinPoint. This costs £14 + £3 p&p + VAT from Longman Logotron.

Landmarks: Victorian Era – New to Longman Logotron's Landmarks series of TV tie-in educational software, the Victorian Era allows children to investigate English village life at various times between 1780 and 1880. The effects of the agricultural and industrial revolutions, represented by the arrival of a mill, canal and railway, can be seen, showing both the impact on the people, and the changes to the village itself. A top-down view of the village is used to discover information about the scene. Worksheets are also included. This costs £25.50 + £3 p&p + VAT from Longman Logotron.

Mechanisms CD – This graphical demonstration of mechanical theory and practice is ideal for maths, technology and physics. Suitable for use on either an Acorn Computer or a Windows machine, the price is £49 + VAT (single user) and £99 + VAT (site licence) from Creative Curriculum Software. (£57 and £115 through Archive respectively.)

Give us 'yer old Beebs!!!

(and A310, A3000, A400, etc, etc.)

We have had an overwhelming response to our suggestion last month that we might re-cycle old computers and peripherals for charitable purposes. So PLEASE, if you have any old Beebs, Masters, printers, user ports, concept keyboards (especially useful for special needs applications), small hard drives, colour monitors, floppy drives, etc, etc just send them in to us at NCS. Potential users include: Downs Syndrome Associations, Mencap, Special Needs Departments in schools.

It won't cost you much to stick them in a big box, take them along to your local post office and send them by parcel post... we'll get them eventually!!! Alternatively, telephone Parcel Line, Target Express or any other carrier who has a depot near you (see your local Yellow Pages) and they will come and pick up the box from you for £10 or £15 or so (especially if you say it's for a charity scheme!).

If you are feeling really generous and have any old RISC OS computers of any vintage that you don't want, we can certainly find them a good home, so just send them in to NCS.

N.B. If any of the things you send don't work, please mark them as such – and send them anyway because we can probably put together two duff ones and make a working one.

Also, whether the items work or not, please mark the box **"For Charity Use"** – otherwise we might think they have come in for repair, fix them and send them back to you with a bill for the repair costs!!

(If you are a school or a charity and want to take advantage of this scheme, drop us a line telling us what you are looking for and we'll see what we can do. Next month, if we have some computers without buyers, we'll advertise them in the magazine.) ♦

PC card for Risc PC – Acorn say...

"Initial stock is expected during April with a steady ramp-up in production during the next few months. If you have already purchased a Risc PC, you are entitled to buy a PC card for £99 +VAT (£116.32) within the next three months. After that time, the price will be £199 +VAT if purchased separately." Presumably, it will be £99 if actually with a Risc PC.

The problem which NCS now have is that there is no discount on the PC cards – Acorn are charging us £99 +VAT which means that we are making a loss on every PC card we sell, especially when you take into account the admin and the cost of postage and packing. We're not asking for sympathy or any extra cash but just that you bear with us as we handle the huge backlog of orders. In particular, may we ask you NOT to keep ringing us up. We will send the cards out to you as soon as we possibly can, and we will let you know in the magazine where we are up to by saying things like "we have so far supplied all PC cards ordered before May 13th 1994" or whatever. Also, we'll put that information on the ansaphone so that you can ring up out of office hours and find out what is happening.

One other problem is that some of you sent cheques which are now more than six months old! They will have to come back to you to have the dates changed. Thanks, in advance, for your cooperation.

Pocketbook leather cases – Network

Solutions can now supply leather carrying cases for the Acorn Pocketbook and Psion Series 3. The student holster is a padded case with a belt loop, for £12.20. The Executive, a wallet style case, holds the Pocketbook and up to two PCMCIA cards, and costs £22.20. Finally, the storage card holds up to six PCMCIA cards (but not the Pocketbook itself) for £17.00. Carriage at £1.50 per order and VAT need to be added to the above prices.

Risc PC Acorn Access – The price has changed on the Acorn Access card for the Risc PC. The new price is £140 through Archive. However, it isn't actually available yet as there are still various issues to be resolved about Ethernet revisions, etc. In the meantime, we can get a Risc PC Access look-alike from Atomwide which will cost £150 through Archive.

Risc PC case expansion – If you want to expand your Risc PC to three or four slices (i.e. to take six or eight expansion cards), they are now available through Archive. To upgrade an ACB15/25 to two slices, as previously, costs £116, to three slices costs £316 and to four slices £352. If you already have a two-slice machine then to go to three slices will cost £257 and to four slices £316.

SAS2 – Morley Electronics have updated their SAS backup software. It has been completely rewritten for enhanced performance and offers a flexible and easy-to-use system. Timed backups, either using a proprietary format or the Unix standard TAR format can be configured and data can be compressed using the RISC OS 3 !Squash application. A Log file is saved to aid restoration, allowing individual or multiple files/directories to be restored. Possible target devices include SCSI tape streamers, hard drives, removable hard disks and floppy disk drives. The cost is £99 +VAT from Morley or £110 through Archive (or £49 +VAT for an upgrade from version 1 from Morley).

TeleText Turbo – XOB have a new version of their TeleCard Network software. The TeleText Turbo can capture and distribute eight live and eight local services from each of up to six TeleCards. Data is cached at the server, so access, even from a remote client, is regularly quicker than a teletext television. The cache is updated automatically so each page will, on average, be no more than a few seconds out of date or, if desired, the client can request that pages are grabbed directly off air. A viewdata editor is supplied to permit the setting up of local services for departments, for example. The server can coexist with other servers, such as level 4. The Card and software costs £299 from XOB. The standard network version of the telecard is now available for £190. The Teletext Turbo software costs £169.

Tesco scheme starts again – The Tesco Computers for Schools scheme starts again on 24th April and runs up to 2nd July. Schools requiring additional packs or with enquiries about the scheme can contact the Schools' Helpline on 0171-580-9370 or send an email to 'computers_for_schools@entity.e-mail.com'. With

Tesco's recent acquisition of over fifty William Low stores, the scope of participation is extended in Scotland.

VerbMaster-French – This is a multitasking verb management and learning application, which supports a range of tenses and features automatic conjugation of regular verbs, easy entering of irregular verbs, addition of new tenses, and production of printed verb tests and verb tables. The supplied version includes a help file and a selection of conjugated verbs. The registered version has additional verb files, along with text-only and Impression DDF format versions of the manual for printing. Registration of VerbMaster costs £7.50 single-user, or £15 for a site licence, and will offer a discount on VerbMaster-German when it is available. Unregistered versions are available from APDL and other PD libraries or direct from the author Nigel Caplan.

VZap – The shareware virus killing software from Digital Phenomena has just been updated, although the price remains at £5. New features include redesigned windows (using NewLook), and suspicious !Boot files are no longer deleted, but suspicious lines are commented out for later inspection. Automatic virus elimination is available and there are, if required, free upgrades and support for registered users. It can scan all known filing

systems with a single click, and it prevents known viruses from loading.

World War II on the Home Front

Another in the set of Anglia Television's Key datafiles, this CD contains a number of resources. A large selection of photographs from the Hulton Deutsch Collection which illustrate the period between 1938 and 1947 are included, along with their own historical text, with captions often written by the photographers and additional comments from today's perspective. The price is £40 +VAT or £45 through Archive.

Review software received...

We have received review copies of the following:

- CDFast (for Networks) (u), •Garden Wildlife CD (e), •More Stage 2 Talking Stories (e),
- PicturePoint (e), •Rainbow Multimedia (e),
- PIMS (Primary Management System) (e),
- TableCalc (u), •Talking Animated Alphabet (e),
- VerbMaster (French) (e).

e=Education, u=Utility.

If you would like to review any of these products, please contact the Archive office. Potential reviewers will need to show that they would use the product in a professional capacity or that they have some knowledge of the particular field. ♦

Norwich Computer Services' Repair Policy

Owing to staff reduction, very little repair work is now done on NCS premises and most of it is currently being done by Repair Zone, an Acorn Service Centre here in Norwich. If you want NCS to handle the repair and to be your point of contact, that's fine but we have to add an administration charge to the price that Repair Zone charge us. Also, as Repair Zone are not VAT registered, if you come through NCS, we have to charge you an extra 17.5%.

For example, if a repair costs us £40 and we add a £5 admin charge plus VAT, that comes to £52.87, so, it would make good sense for you to go straight to Repair Zone (or Avie Electronics for fixed-price repairs). That would also help us because we cannot make a profit from handling repairs, so it just represents a drain on our resources as things stand.

We will, of course, continue to handle all warranty repairs ourselves. ♦

Small Ads

(Small ads for Acorn RISC OS computers and related products are free for subscribers but we reserve the right to publish all, part or none of the material you send, as we think fit. Sending small ads (especially long ones!) on disk is helpful but not essential. Ed)

512Kb RAM disk & new battery (for Pocket Book/Series 3/Series 3a - £140 new) £100, Psion games disk one (7 games) £20. Phone Mark after 6pm on 01905-754277.

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A410/I, 4Mb Ram, 33MHz ARM3, 50MB HD, NewLook desktop, I/O module, Midi, Sound sampler, keyboard extension cable £525 o.n.o. Phone Mark after 6pm on 01905-754277.

A410/I, ARM3, 20MB HD, RISC OS 3.1, Beebug VME & 5¼" interface, Taxan 770+LR monitor, Panasonic KX-P1124 printer £550. Phone 01772-685553 eves.

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A5000 4Mb, 120Mb HD, FPA, Acorn Multisync, Learning Curve (less 1st WP), PC Emulator + Games £900. ProArtisan2CD £40. ANSI C Release 3 £50. Taxan 795 monitor £200. Phone David on 01722-338981.

A5000 8Mb, 120Mb HD, internal IDE 105Mb Syquest (no cartridge), Eizo F550i 17" multisync. A highly capable system - can be viewed at NCS. £1300 complete, or £400 for monitor alone. Phone Iain Cameron 01483-751251.

ARCtulate £7, Enter the Realm £7, Sensible Soccer - International Edition £10,

Archive Mousemat £1.50!, Cover disks (1991+, Archimedes World, Acorn Computing and Acorn User) £1 each - write with your wants. Jon Aylwin, 4 St Margarets Close, Hemyock, Devon, EX15 3XJ.

CC Laser Direct 4 600dpi laser printer, Series 2 controller, v.g.c, boxed with manuals and latest software, on-site maintenance contract until Feb 96. Can be used with others computer. Offers around £400. Phone 01923-820651.

Genesis Plus £15, 1st Word Plus brand new, unregistered £10, E-Type £7.50, PowerBand £7.50. RISC OS Applications and User Guides £3 each or £5 the pair. Phone 01962-880250 eves.

Gume Laser Direct 300dpi, includes spare toner cartridge. Recent new drum. (will run on Risc PC with Calligraph card) £395. Pay over 3 months! Acorn Advance (release 2) unopened and unregistered £70. Phone Paul Cayton 01943-878133 eves or 0113-277-7711 day.

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Charity Sales

No charity bits this month as they are all going into the Charity Bring and Buy which NCS and Acorn User are co-sponsoring at the Acorn User Show in Harrogate on 6/7th May. If you have things to contribute, please send them direct to NCS - to arrive by 3rd May, please. Thank you! ♦

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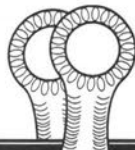
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Acorn and the Internet

Adrian Bool

In this series of articles, I hope to describe to you all aspects of linking your dear little Acorn onto The Net – from the current ways of accessing the networks to the impressive technology that is just round the corner. I also aim to satisfy both sides of the Internet divide – the dial-up user, using either a modem or ISDN, and the permanently connected user, using an Ethernet card to access the rest of the world.

Often we Acorn users are proud of the groundbreaking design of our machines – whilst the so-called industry standards try to catch up. Sadly, however, I have to report that, in the case of software to access the Internet, we are well behind many other operating systems. However, all is not lost! The new generation of Internet Access Software that is soon to be released for RISC OS should place Acorns as the perfect platform to access the Net.

This month, I shall introduce my simplified notions of several of the concepts that underlie the implementation of networking software – to help readers into an understanding of the apparent over-complexity of computer networks.

Future months will then concentrate on the more Acorn-specific aspects of the Internet.

Networking

The most important concepts in networking – and, indeed, in many other areas of computing – are Stacks and Protocols which go hand-in-hand to create a better world.

Microsoft – Striving to create The Perfect World

Stacks evolved largely because the perfect application does not, and never will, exist. The perfect application would do everything you ever wanted, do it efficiently and operate seamlessly with any hardware you have now – or ever will have. Despite Microsoft's constant efforts at writing such applications, they will never appear.

The stack concept attempts to alleviate the problems incurred by not having the perfect application by stepping through a particular production cycle:

- ◆ The problem is analysed then split it into several separate layers.
- ◆ The task that each layer needs to perform is then decided upon, but how that task is implemented is not specified.
- ◆ Once the task that each layer is to perform is known, 'protocols' are defined that provide an interface between each layer.
- ◆ Only when the protocols are decided upon may an implementation of each layer be written.

Just as the perfect application is an impossible entity, so is the perfect layer, but that is no longer a problem! All that is required is a new layer – small in comparison to the whole application – which performs your newly defined task.

This new layer implementation then simply needs to be slotted into the stack and, since the protocols have not changed, the new layer happily talks to the rest of your application and vice-versa.

Back to the Net

The Internet itself is held together by a stack and the protocols that bind it together. There are many, possibly hundreds, of protocols in use over the Net, but most of these are fairly abstract, largely optional, protocols existing only to implement a particular application over the network. There are, however, a core set of protocols that bind the Internet together. These protocols are referred to as TCP/IP (Transfer Control Protocol / Interface Protocol).

TCP/IP

The TCP/IP protocols specify the mid-range of the network stack – not specifying the very low level hardware details. This enables the Internet to travel over a wide range of hardware – Ethernet networks, wide area networks, analogue phone lines, ISDN lines and carrier pigeons! Nor does TCP/IP specify the application (high) level protocols – thus not limiting the applications that may be run over the Internet.

TCP/IP consists of two main protocols, IP and TCP, together with several other ancillary protocols used largely for the control of the network.

IP

IP is the basis of the whole Internet. The IP layer of the stack defines the structure of a packet. The data that one wants to send gets inserted into a series of packets. Around the real data is ancillary information that describes to anyone handling the packet, from where it is going and to where it has to go eventually. A rough approximation of an IP packet is,

```
+-----+
+ header + data to be transmitted +
+-----+
```

When the IP protocol receives the data that is to be sent across the networks, the IP layer forms the appropriate packet and sends it out. However, this is all that it does. This means that:

- ◆ It does not guarantee the packet will arrive at the destination.
- ◆ It does not guarantee the packets arrive in the order they were transmitted.

As you can imagine, using IP to communicate between two machines would be extremely precarious, and so, to save the day, here comes TCP.

TCP

TCP is a layer that sits on top of IP. Unlike IP, the TCP protocol provides a two-way stream of characters between two processes on two separate machines. Again unlike IP, TCP guarantees that the characters will be received correctly and in the same order as they were transmitted. TCP is known as a connection-oriented protocol.

It is immediately obvious that TCP is a far more secure basis onto which to build further levels and their associated protocols, and indeed many of the Internet's most important higher level protocols rest on top of TCP; these include:

SMTP – Simple Mail Transfer Protocol – this protocol is used by all of the machines on the Internet to transfer mail from one site to another.

POP – Post Office Protocol – used to transfer mail on demand from a central mail server to a PC for reading by the user.

NNTP – Network News Transfer Protocol – this defines the interaction between machines on the Internet whilst transferring Usenet news.

HTTP – HyperText Transfer Protocol – used to transfer World Wide Web information across the Internet.

FTP – File Transfer Protocol – a protocol for transferring files!

Telnet – A protocol allowing a user on one machine to log onto another machine and use that machine as if they were sitting directly in front of it.

UDP

This protocol, like TCP, sits atop IP. It differs greatly from TCP in that it provides a connection-less, 'datagram-oriented' method of communication, similar to the IP protocol itself.

Many of the 'nuts and bolts' protocols of the Internet are based on UDP. One of the most important of these is DNS.

DNS

Every port of every machine on the Internet has an IP address, so the IP layer knows where to send a packet. The IP address is a 32-bit number and is written, by convention, as

193.119.176.64

i.e. each byte is written in decimal, each separated by a dot.

Humans have great difficulty remembering such addresses accurately, and so there is an alternative textual format for referring to a port. The textual name for the machine whose IP address is given above is:

ovej.a.u-net.com (ovej.a is spanish for sheep!)

Naturally, there needs to be some way for the computers to change the name that a user types into an address and that the IP layer can understand. This method is known as the Domain Name Service (DNS). This is a truly massive distributed database containing all the name and IP addresses of every machine on the Internet.

For more information...

All of the official protocols that are used over the Internet are described in a set of documents known as the RFCs – Requests For Comments. A subset of the many hundreds of RFCs are the STDs (standards) documents which describe the latest versions of the major Internet protocols. All of these

documents are available over the Internet from a number of sites.

Following this basic background information about the Internet, next month's article will focus on getting Acorns onto the Net, hopefully with reviews of Doggysoft's Termite Internet and ANT's Internet Suite, both of which should be released very soon. ♦

Chess II – The Champion

Tord Eriksson

Having reviewed a number of chess programs through the years, I think David Pilling has, yet again, produced a winner. This review is based on a beta-test version, but I am quite convinced that his new chess program is going to be the most popular yet.

Manual

As before, the program comes with a manual and the program itself on an 800Kb disk. The manual is, as yet, only a provisional version, but it covers things like importing text files, mate puzzles and printing.

Buttons galore

The much-improved Chess program has, like Impression, grown buttons. What is more, as you would like to happen to your fiancée, Chess II has become more intelligent, grown new features and looks smashing.

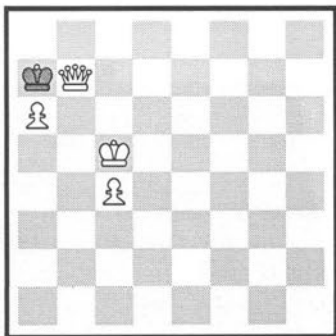
Let's begin with the buttons on the vertical icon bar. They include everything you might want, and there's a menu to boot, as you can see above.

The buttons are, from the top: 2D or 3D-view, rotate the view (90° at a time), suggestion, step back one move, number of steps done, possible steps with the chosen piece, and human or computer to play black or green. The little dot on the white 'human' button means it is waiting.

The menu is mainly self-explanatory, 'Game History' being a list of all moves done so far, in a scrollable window. This can be saved separately for further study.



In addition to playing even more strongly than its predecessor, Chess II gives the dedicated chess player numerous options: You can save an entire game as a file, and a certain position as a sprite or as a drawfile, or just save a list of the moves in a game.



This is an example of a drawfile and overleaf are the sprite versions.

In the Choices column, you can select row numbers (1-8, A-H) on/off, show mate sequence on/off, beep (very helpful when playing at tournament strength, as the moves take some time), level of play (from novice to tournament, or a certain number of draws in a set time).

For those who have the old version, it is possible to import saved games. The ambitious can write their own text files, using a number of formats explained in the manual, to import directly into Chess II.

At any time, you can stop a game and replay parts of the game or the entire game – changing the events if you want to. I certainly used the “one step back” button a lot.

Playing and enjoying

The most enjoyable part of the new Chess II is the speed with which it plays and the fluent moves of the different pieces.

At tournament level, play does take some time, but it usually beats me on novice or beginner level (Grumble!) so I don't mind. I am no chess master, but I think the game plays more strongly than ever, even at novice level.

When I reviewed Chess-3D, I stated that I would love to have the graphics of that game, maybe a bit better implemented, combined with the battle strength and the speed of Chess. Well, I must say that David Pilling has done just that and added a bag of extra features, just to be on the safe side!

Using mostly Macs today, I must admit that, as a chess game, this is hard to beat in any way, on any computer. Just as Impression Publisher has become as nice to use as Quark Xpress, Chess has now matured into a truly great chess program.

**Fully
recommended
for novice,
enthusiast and
pro, even if the
price were more
than it is – £16.**

The only drawback, compared to the original version, is that the game now needs at least 640Kb to start up, meaning that I can just cram in one Chess II together with the latest version of Impression Publisher+ on my 4Mb A3000.

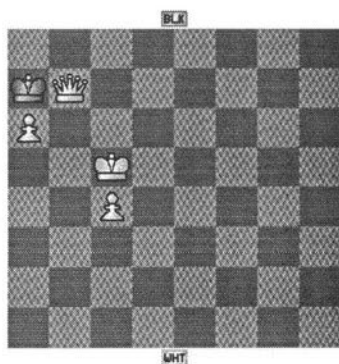
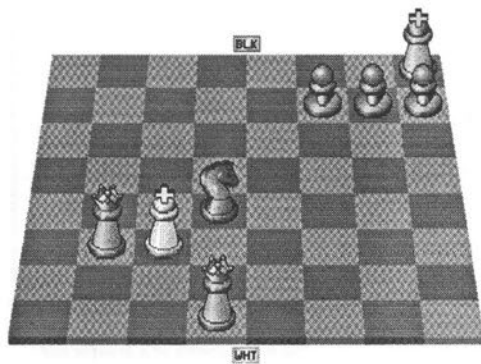
I remember fondly running eight copies of the original Chess at once! Today you can cram 8Mb into an A3000 or

buy one of those fancy new machines and fill it with 16Mb or more, so if you really need multiple Chesses it is still possible!

Conclusion

Chess II will be the perfect software for your local chess club. Novices can train on the basics, without the opponent getting bored, the club magazine editor can produce examples in sprite or draw format and the theorists can set up classic problems.

As drawfiles are easily converted into other formats suitable for Macs or PCs (using ArtWorks or similar), even national clubs and papers will be greatly helped in producing their chess columns. Fully recommended for novice, enthusiast and pro, even if the price were more than it is – £16 through Archive! ♦



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Online Media

Graham Jones + Adrian Bool

Welcome to our short series of articles about Online Media and its related partners and technologies. This first article looks into our thoughts about the ideas behind Online Media and the myriad of other companies that work with (... and against!) Online Media. The next article will be about the technology that makes it all possible and the third, well I don't plan that far in advance.

I am sure many of us Acorn enthusiasts (with a big or little 'E') are greatly interested in both the technology that Online Media are developing and how Online Media themselves fare. The more Set Top Boxes (STBs) sold, the cheaper our beloved Acorns may well become... There is also the wonderful thought of plugging our current machines into these new high speed digital networks, using technology pioneered by Online Media. Maybe some of you may even like to own an STB!

TV how it should be

The idea is very simple: why do I need to watch the TV programmes when some bloke at the BBC decides I should watch it? What sort of a free country is that? Currently, we waste a lot of time waiting for our favourite programmes to appear on the box. Imagine what it would be like if you could come home in the evening, watch all the programmes you wanted consecutively and then disappear off to the pub or your favourite abode!

Sadly, there are several unavoidable reasons, notably bandwidth, why TV utopia is not with us yet. However, with the abilities of fibre-optics to increase the available bandwidth to unprecedented levels, and the emergence of MPEG technology to drastically decrease the amount of data that needs to be transmitted, utopia is getting ever nearer.

Risc PC meets TV

Armed with Acorn's powerful Risc PC architecture and the expertise of a host of other companies, Online Media is at the forefront of delivering heaven

into each TV viewer's home. And, indeed, some viewers are already experiencing the fruits of Online Media's labour. These viewers are part of 'The Cambridge Trials'. This is a trial service run by Cambridge Cable using the technology of Online Media and its associates to provide an interactive TV service to a number of families, not surprisingly, in Cambridge.

Who's involved?

Involved in the trials in Cambridge are several companies well known in the Acorn area. Online Media head the consortium, with Anglia TV and ITN providing some of the initial services, and S J Research and ATM providing the ability to supply the high speed data transfer. The Cambridge Cable fibre-optic cable network is central to the current trials, supplying a route for data to be transmitted to homes throughout the Cambridge area. Naturally Acorn, ARM Ltd and Olivetti are part of the group. Online Media is an off-shoot of Acorn, as is ARM Ltd, and Olivetti currently own 80% of Acorn. Olivetti also have their own Telecom and Multimedia division, with Online Media leading their initiative in digital interactive TV. That just leaves Denton Hall, a media lawyer providing legal support in the content rights and regulation area.

Maybe Acorn
will gain some
serious respect
in a world
which normally
brushes them
aside.

Many other companies are involved in supplying different aspects of the initial services. The strength of the group seems to grow by the day with more and more companies showing an interest in the interactive TV phenomenon - certainly judging by the never-ending flow of press releases coming through my door.

How much will it cost?

At the moment, the viewers participating in the Cambridge trials pay absolutely nothing for the service. After the Online Media consortium has received enough feedback from the current users on the feel of the the new media, they are then going to try various charging models on the users. Charging

for the system will be awkward. Currently, the public is used to paying its annual licence fee, then having unlimited viewing time. For the current TV companies, this works out fine because it costs exactly the same and uses exactly the same resources to broadcast to one or one million viewers over the air waves. With the cable system, where each viewer watches what they want, when they want, things are very different. Every second that a user is watching a TV program or a movie or listening to an online CD, it costs the cable company in used bandwidth, since a copy of the data has to be relayed to each user separately, as opposed to the same data being broadcast to all viewers.

Online Media and their consortium

Despite the current range of Online Media Set Top Boxes being basically customised Risc PCs, it appears that Online Media have purposely disguised the powerful computer nature of the box, making it seem to the casual viewer like an altogether simpler affair – little do they know the complex and powerful technology that sits behind the simple video-like remote control that they use to control the Set Top Box.

One of the main services that the Consortium provides is video on demand. At the demonstration I attended, only a few movies were available; but when the system is running normally, I would imagine that the range available would be the same as you would find in a video shop.

Recent developments include the announcement of a joint development agreement between Online Media and Macromedia. Macromedia are described as a 'leading multimedia application developer'. Online Media is now a full implementation partner in the 'Portable Player programme'. I have little knowledge about this but I understand that, in combination with new standards being set, this will allow multimedia productions to be available on many different platforms with no alterations when moving to a new setup. Macromedia's products seem to cover every aspect of developing multimedia products, sound recording/editing, 3D design, animation, etc.

Recently, Online Media and Digital Equipment Corporation (DEC) signed a co-operative

development agreement. This will initially involve a 'technology swap'; DEC supplying server equipment (getting the information to the 'viewer'), Online Media supplying the set-top boxes able to interpret and present the information to the 'viewer'.

What about the competition?

BT have just begun trials of their own interactive TV system. Information is fed to your home via a phone line using a system that allows 2Mb per second in one direction, along with some slower control signals and the normal telephone service. The STB used in their trials is based on an Apple Mac LC475, modified to support the new services. This service sounds very similar to the Online Media trials, including Home shopping, movies, music, education and sport. Interestingly enough, Anglia are supplying material for the BT trials, as is the BBC.

Apparently, a company called Videotron UK have had interactive TV available in London for around three years now. This seems to be a simpler system, allowing selection of one program from a menu, whereupon the interaction ends. Alternatively, a question and answer system may be used, for example in educational programs. Videotron have recently introduced a newer mode of operation in which extra information is transmitted along with the main program – for example, different camera views or action replay from a live sports match. There is also an interactive news, travel and weather service.

Using a different approach, systems such as Philips CD-i, advertised as 'One player, countless opportunities' are competing in the same area. These systems confine you to playing the games or movies you have available on CD-ROM. Interactive TV with the STB should eventually allow greater choice of movie, and the possibility of multiplayer games with/against people with similar systems, and extra services like shopping. In fact, Philips Media are likely to supply material created for CD-i and VideoCD for the OnLine Media tests, so they are clearly looking to the future. CD-i is available now, whereas it will be a year or two before the STB and interactive TV are widely available – so we might see a shift by Philips to their own interactive TV

system, or a greater involvement in current projects as time goes by.

Viewer or user?

To be honest, TV bores me silly most of the time. What I prefer is a good old-fashioned computer! "But why?", I ask myself.

Think about the title of this section – 'Viewer or User'. Viewers participate in a one-way session with the TV, whilst users participate in a two-way conversation with their machine. Are Online Media creating an exciting new two-way communication, or a slightly more pedestrian one-way system? From what I have seen of Online Media, the system is going to be leaning towards the one-way communication – with the interactive part of the system amounting to the sort of interaction one presently has with a video recorder – and that doesn't drive me wild.

Conclusion

What are the implications for the Acorn world in general and for the STB user in particular?

Acorn hardware and software developed for the STB could filter back to the Risc PC – we're already seeing this happen with CC's MPEG video card, which is a development of hardware built into the Online Media STB. Other hardware and software could be treated in this way, providing a great source of expansion requiring little extra development.

There is no real need for the interaction to be one-way, as suggested earlier. If the facilities currently available on the Internet could be transferred to interactive TV, and expanded, making them easier for the general man in the street to use, the potential for true interaction is enormous. Individual users or groups should be able to contribute to the information available, allowing the views of people worldwide to be combined. The potential for business is vast. A bank of information could be prepared which the user will investigate; far better than producing an advert which must incorporate everything required in a static image or a few seconds on TV.

In addition, as the STB takes off, maybe Acorn will gain some serious respect in a world which normally brushes them aside. ♦

Latest news

In the last issue of Archive (8.7 p31) Paul reported on the recent licensing of the ARM Ltd RISC technology by Digital Semiconductor. The development of a high speed but not power-hungry processor could be a big influence on the success of the Online Media STB's. Commenting on the agreement, Malcolm Bird, Chief Executive of Online Media, said: "The ARM processor was the obvious choice for our digital set-top products. Now, the combination of the benefits of the ARM architecture with the performance available from DEC's processes and technology shows the way for the future. Our interactive TV products can use all the performance that results. We like the price and low power consumption on offer as well!"

Online Media and Viewcall Europe plc have recently signed a supply and co-operative development agreement under which Online Media will design and supply digital set-top boxes for Viewcall's specific requirements. The Viewcall service is intended to go to commercial trials later this year. The STB to be used will incorporate the ARM 7500. This is a combined processor/memory and video controller similar to the ARM 250 used in the A4000/A3020 series of machines, except that it is based on the ARM 7 processor core. Viewcall have also implemented their own fractal compression software on the Online Media machines. The combination of these factors will allow TV-quality still images to be transmitted down an ordinary telephone line. The services provided will include local and national services, including catalogue shopping and Internet access. Since the STB's will be based on Online Media's existing hardware, they will be compatible with existing software packages for Acorn computers and Online Media designs, and also with cable and other transmission media as required.

Finally, Oracle Corporation have announced that Online Media will port the Oracle New Media software to its machines. "The Oracle environment allows software developers to write interactive multimedia applications without limiting the set-top devices with which they can work. End-users don't want to concern themselves with connectivity; they want to know that the set-top box will talk to the

infrastructure that is provided," said Malcolm Bird, chief executive of Online Media. "Oracle's environment makes it possible for set-top designers to be innovative in their product architectures, which means that new families of products will emerge with additional capabilities, while retaining compatibility."

Oracle, which is based in California, is the world's leading supplier of information management

software. The Oracle New Media suite of software provides a means of creating broadcast-quality multimedia applications for both CD-ROM and interactive television. It represents a library which can manage all forms of information: video, audio, text, etc. Lastly, STBs are able to access the library of data and present it to the viewer/user. ♦

Map Importer

Mike Samworth

Map Importer is produced by Minerva Software and works with all RISC OS machines, having been trialed on A3000, A4000 and Risc PC. In essence, it is a simple piece of software that performs a single function, that of converting Ordnance Survey data into drawfiles for further use.

Ordnance Survey produce map data in a number of forms, one of which is National Transfer Format (NTF). It is this type of data that Map Importer converts into drawfiles. Once the data is in Draw format, it can, of course, be manipulated, printed, enhanced or moved into a DTP package, database or whatever. The use of the software depends on the possible uses to which drawfiles of maps can be put. Depending upon which digital data file is processed, it can provide geographical information such as buildings, roads, fences, rivers, railways, places names and county boundaries.

The program is very simple to use. It is supplied on a single floppy and, once installed, an icon appears on the icon bar in the usual fashion. NTF files are dropped onto this, whereupon the hourglass appears as the program converts the data. When this is complete, a window appears giving details of the resulting drawfile, including type and size. The usual Draw icon can then be dragged to a filer window to save it.

Menu options, accessed from the icon bar, include being able to choose the area of the map converted, the detail (which is items to include, such as roads, boundaries, etc) and some control over output, the

thickness of the lines, for instance. Obviously, resultant drawfiles can be printed using the standard printer drivers.

The package comes with two data files (NTF) on the disk, neither of which are particularly inspiring, and the manual includes a short tutorial. Anyone familiar with RISC OS will have no trouble at all with the package.

The package was tried by a number of Secondary Geography teachers. They seemed quite impressed by the principle of the package and by its execution but a little short of ideas on how it would enhance learning in their subject. One criticism was that contours do not appear on any of the map data supplied. Also, they seemed to know little about the availability of data files, though the manual states these are freely available to LEA-funded establishments (which we are not). The package seems to perform its function admirably but will stand or fall on the ease with which teachers are able to obtain the data files, particularly of local areas.

There is a very bold statement in the manual! "The impact of this unique software will be wide ranging and Minerva guarantee that teachers will use OS data in many exciting ways which have not been previously possible."

Perhaps it would have been a good idea for them to give examples of this type of thing in the manual, ideally linked to better suited data files on the disk. Map Importer costs £29.95 for a single user copy, £45 for a primary site licence and £120 for a secondary site licence. (All + p&p and VAT). ♦

It's time to
get *sensitive*
about the way
you *create*
your graphics

Many computer users feel that a graphics tablet is more natural to use than a mouse and without doubt it gives a much faster, smoother and higher resolution response. The mouse remains functional and can be used at the same time as the pen — however the pen has such a natural and precise feel, you will probably prefer it for many operations such as moving windows, drag and drop, region selection etc.

The new (approximately A6) ArtPad tablet offers a superb specification, even by Wacom standards; resolution exceeding 2000 dpi, 200 samples per second and 256 levels of pressure. All Wacom tablets include a cordless pen for added ease of use and flexibility.

The tablets are pressure sensitive, so in combination with suitable applications they can produce realistic effects such as variable width (the Eesox ArtWorks pressure sensitive tool) or variable density airbrush painting (PhotoDesk). The Computer Concepts' drivers will be compatible with these and other software that can take advantage of the pressure information, such as Studio 24 and DA Picture.

Computer Concepts can supply the tablets with either Photodesk or the Eesox Pressure Tool at special prices. **PHOTODESK** is a photo retouching package from Spacetechn, which offers a wide range of advanced image manipulation features; for example an airbrush, paintbrush and magic wand, full 24 bit colour support, the use of virtual memory, OLE with Impression, complete undo, effects such as colouring, toning and masking, motion blurring, cloning and smudge and smear.

The package contains the Wacom tablet (A6 ArtPad, A5 or A4) and manual, a cordless pen, Computer Concepts driver software suitable for all models of Acorn RISC computer (A3000 must have serial port upgrade) and PC drivers. Requires 1Mbyte or more.

Price: A6 ArtPad & drivers: £169 + VAT (£198.57 incl.)

A5 tablet & drivers: £399 + VAT (£468.82 incl.)

A4 tablet & drivers: £549 + VAT (£645.07 incl.)

ArtWorks Pressure Tool with tablet: add £10 + VAT (£11.75 incl.)

PhotoDesk with tablet: add £125 + VAT (£146.87 incl.)

ArtWorks Pressure Tool: £39 + VAT (£45.82 incl.) PhotoDesk: £169 + VAT (£198.57 incl.)



Computer Concepts Ltd

RISC OS 3 **Turbo** DRIVERS

VERSION

4

...more Drivers

The TurboDrivers have been extended to support new printers, including the Epson Stylus Colour and to be compatible with the latest versions of Acorn !Printers and the RiscPC.

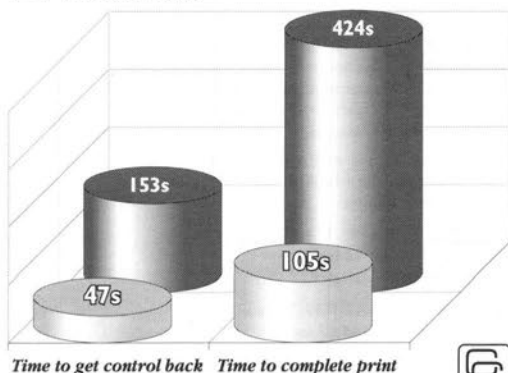
...more Turbo!

In the simplest cases, printing single copies of black and white documents, with little or no graphics, the TurboDrivers give performance gains of twice or more. However, for more complex documents, or multiple copies, or for colour documents the gains can be even more spectacular.

Our tests show that when printing two copies of a typical 3 page document, containing a good mix of font styles, Draw and Sprite graphics, TurboDrivers can give control back up to ten times sooner than the Acorn drivers.

Risc PC TurboDriver timings

■ Acorn !Printers
■ TurboDrivers



These tests are done with the Acorn drivers in 'background' mode (the new 'faster' way to get control back). When using the Acorn drivers in 'normal' mode the differences are even greater. The speed gains apply both to the older Acorn range and the Risc PC computers.

With the availability of new reasonable cost colour inkjet printers, and the increasing use of colour in printed documents, there is now even more reason to use TurboDrivers than ever before.

TurboDrivers Canon - £49 + VAT (£57.57 inc)

TurboDrivers HP - £49 + VAT (£57.57 inc)

TurboDrivers Epson - £49 + VAT (£57.57 inc)

Version 4 drivers require Risc OS 3.1 or later.

2 MByte RAM and hard disc recommended.

Please state printer type when ordering.



The graph shows the spectacular performance gains that are possible using TurboDrivers. These comparisons are made using the latest versions of !Printers, with a fairly complex single page DTP document (!MicroScope) on a colour inkjet and show that even on a Risc PC, the TurboDrivers can dramatically improve your printing performance.



Computer Concepts Ltd

Gaddesden Place, Hemel Hempstead, Herts, HP2 6EX Tel 01442 63933 Fax 01422 231632

Email info@ccconcepts.co.uk

Non-Designer's Design Book

Paul Beverley

The Non-Designer's Design Book was reviewed a couple of months ago (8.6 p23) but I want to draw attention to it again because I think it is so good. I thought I'd check whether it was just me who was so enthusiastic about it, so I wrote to ten of the people who had bought a copy through Archive to get their views.

Users' views

I asked them to say, on a scale of 1 to 5, (1= Poor, 2=Fair, 3=Average, 4=Good, 5=Excellent) what they thought of the book in terms of (a) **content**, (b) **readability**, and (c) **value for money**. I also invited them, if they had time, to offer their own personal comments. Here are the responses I have had so far...

(5, 5, 5) "I bought it on the strength of the review – which struck me as a good assessment of the book."

(5, 5, 4) "Coming from a design-oriented background, I'm always amused by people's

assumption that buying a computer activates a fully-fledged, but latent, design ability. There are an awful lot of magazines, posters, leaflets, etc being produced by computer owners who have no appreciation that type and layout have to be **learnt**, even if you are gifted with natural ability to start with. Robin's book should be compulsory reading."

(5+, 5+, 5++) "If I had had this book a year ago, I wouldn't have wasted £300+ on a DTP correspondence course."

(5, 5, 5) No comment

(6, 6, 6) "It's made a complete difference to the way I look at text – even with ordinary wordprocessing, let alone page layout."

(3, 5, 4) "Compared with other books on a similar theme (especially *Into Print* by Quilliam & Grove-

Since 74% of the assessments were 'excellent' or better, I think we can safely say that they liked it!

Stephenson) this one is a little limited in content – but then it deals with that content well." (Sadly, that book is now out of print. Ed.)

(4, 4, 4) No comment

(5, 5, 5) "An excellent book which I expect to be in regular use."

(5, 5, 4) "A pleasure to read and, consequently, easy to digest. I learnt more from this book (and remember) than from other sources I have read in the past. Thanks for bringing this book to my attention."

(Not a bad response rate (90%) to my request for comments – many thanks to all those who responded so quickly.)

So that's one 'average' (4%) for content but nothing less than 'good' (22%) from anyone on any of the three criteria and 74% of the assessments were 'excellent' or better so I think we can safely say that they liked it!

The Editor's view

The main reason I think it is so good is that it is *simple*. OK, it's not a textbook for a design course, and OK, it might not be as full of content as some books but it presents you with the basic principles. What's more, it does it simply and with lots of example, so that you can *see* what she means. The result is that (a) you can understand them, (b) you can remember them and (c) you can apply them.

Just to show you that even I can remember them, the main design principles that Robin suggests are **Contrast**, **Repetition**, **Alignment** and **Proximity** – and I know what each means and I can, and do, apply them. (She even suggests an acronym to help us remember them – although I don't think **CARP** is terribly memorable, do you?!)

Also, I can remember and identify the five main categories of type – Old Style, Modern Style, Sans Serif, Slab Serif and Script. (Drat, I did that from memory and there are actually six – I missed out *Decorative* – but I never use them in any of my work so I can be forgiven, can't I?!)

Finally, I can identify and explain the three main ways of combining different typefaces: Concord (OK), Conflict (Bad) and Contrast (Good).

The proof of the pudding...

(This is probably dangerous but...) I have used what I learned from the book to make changes to Archive this month. Now it's possible that you may not like the changes – although I hope you do – but the point is that, having read Robin's book, I felt confident to have a go at fiddling things around and trying to improve the look of the magazine. In other words, I am now able, consciously, to make changes and have a vocabulary for discussing the changes.

For example, in terms of using type, I have moved away from the 'safe' technique of using 'concord' (different weights and styles of the same basic face, Plantin) to the bolder and more interesting use of 'contrast' – using Plantin (an old style face) for the body text with Gill Sans (a sans serif face) for the titles and 'bold' bits. For added contrast, I have even gone up to the UltraBold weight of Gill Sans.

For those who already have a copy of the book, see if you can see what principles I have used (well, tried to!) in making other changes. I have consciously used repetition and proximity – although the latter is difficult in a document that is so jam-packed with information. I think the alignment was there already in the original design.

The offer

As you will have gathered by now, I think that this is a book that **every** WP and DTP owner should

have. I'm so convinced that you will find it useful that I am prepared to offer a **complete money-back guarantee**.

- ◆ you pay £13
- ◆ we send you the book
- ◆ you keep the packaging
- ◆ you return the book within 14 days
- ◆ we send you a **full refund** – i.e. £13

No questions will be asked – there'll be no need to give reasons for returning it and there'll be no deduction for postage or admin.

I'm even prepared to extend this outside the UK although, obviously, the initial cost is higher because of the extra postage:

- ◆ Europe £14
- ◆ Australasia £17
- ◆ Elsewhere £16

What is more, we won't make any surcharge on credit cards for this one purchase.

Anyone can use it

Remember that this book applies to **any type of computer**, not just Acorn. As you can see from the responses I have shared with you, people will thank you for recommending the Non-Designer's Design Book to them – and the sales will help to keep Norwich Computer Services afloat!! So feel free to offer a copy to a friend, giving them the same money-back guarantee as we're offering you. ◆

Club News

Wakefield Acorn Computer User Group will be changing its meeting night from the first Thursday of each month, to the **first Wednesday** of each month, with effect from the July meeting.

Meetings are held at the West Yorkshire Sports & Social Club, Sandal Hall Close, Walton Lane, off the A61 Barnsley Road, Sandal, Wakefield at 7.30 – 9.30/10p.m. Membership is £6 p.a. for Full or Corresponding Members, and we have a Family

Membership at £10 p.a. Visitors can come on the night and pay 75p at the door.

The User Group will be having a stand at the Spring Acorn User Show in Harrogate, where anyone interested may visit the stand and find out more about what we do.

Contact address for details is: 95 Cumbrian Way, Lupset Park, Wakefield, WF2 8JT. ◆

Help!!!!

Articles wanted – Thanks for all the response to the request last time for (ideas for) articles. I've had a few articles – for which, many thanks – and I've been given a few ideas.

Printers – Could someone give advice about the choice of printer – dot matrix, inkjet and/or laser printers? (I realise this is a big job!)

Educational jargon – We've had a very useful glossary of Acorn computing terms but what about someone explaining the educational jargon used in Archive? What is a Key Stage, for example?

Ed. ♦

Business Strategy game – Does anyone know of a business strategy game for RISC OS computers? Something like "Detroit" on the PC is what we're trying to find.

Ethne Scott, Norwich. ♦

Changing Style – I recently purchased Impression Style, and, on the whole, I find it very good except for an annoying tendency it has to unexpectedly jump out of whatever condition has been selected on the button bar. For example, in composing this, I had initial difficulty in getting it to stay in 14pt as it kept going back to 12pt unbidden! The same thing happens with the various fonts, the bold button, etc. I wrote to CC about it but they appear to be unable to answer queries at the moment.

I have heard of others experiencing the same problem and wonder if it is caused by a software bug in Style. However, I noticed a similar problem with First Word Plus. When selecting italics, for example, it would sometimes jump out of it without warning, or revert to it later after it had been deselected.

Gerry Muldowney, Reading. ♦

I frequently have similar problems with Impression; I find it one of the most annoying features. Early wordprocessors had definite markers where styles and

effects changed – embedded commands in Wordwise for example. WYSIWYG editors, however, hide this information, and many packages seem to have rather random methods for handling the changes.

Take the text 'stylechange', for example. If I click between the 'r' and the 'y' then I would get (and expect) the bold effect to be present. Similarly, I would expect it to be absent between the 'h' and the 'a'. What about between the 'e' and the 'c'? In this case, the bold is used.

The situation is further complicated if there is a space, since it is not apparent whether the effect is applied to the space or not. In Impression, text entered at the caret seems to take the style information from the character to the left, but if you change the style at a point in the text, and move the caret (even to the same place, for example if you open another window and the caret is 'lost') then the style change will not appear in the text, which frequently causes confusion. Another effect can occur if you have floating blank lines, particularly at the end of the text, you find that they can have styles from earlier in the document attached.

Matthew Hunter, NCS ♦

Commodore emulator – Does anyone know of a Commodore 64 emulator for the Acorn machines so that I can run my old games and other software? Also, is there any way of linking a Commodore 1541 Mk2 5¼" floppy drive to an Acorn computer?

Thomas Nelson, Nottingham. ♦

Midi, Sibelius, etc – I am a computer programmer, musician and devoted Acorn user. I admit to a brief affair with a PC but soon saw the error of my ways. I now have a Risc PC and use Sibelius 7 for writing music using notation. It has basic Midi playback facilities but it lacks the real-time input of note data and there is no control over Midi events such as aftertouch, pitch bend, and program (instrument) change.

Sibelius say that real-time input and standard Midi file import/export are coming, but Sibelius 7 is not a sequencer, it is a score editor, and any Midi input/output is a bonus.

There is a gaping hole in the Acorn user market for a new kind of sequencer – fast and intelligent, fun to use. I have loads of ideas but neither enough time to develop them nor the necessary knowledge of wimp programming. I do have a good grasp of data design and I know what the product should do.

I am looking for any number of partners to help me produce a suite of packages that will provide music composition and Midi sequencing/editing facilities – Midi file import/export is a must. My interest lies in having the package to use. Your interest may be likewise or, if the product is saleable, maybe you want to make some money.

Please contact me, either by phone or by letter. Let me know what sort of programs you write. Perhaps you could send me a disk.

**Steve Atkinson, 8 Beechwood Mount,
Burley, Leeds LS4 2NQ. (0113-275-7325)**

Printing problems – I have a font called Zapf. However, when using the Canon BJ Turbo Driver from CC, Zapf will not print. It does appear correctly on screen, both in Impression II and Draw. However, when told to print, Impression just brings up an error 'Can't find font', while Draw just ignores it when printing. I have written to CC but have received no answer. Can anyone else help?

Paul Pibworth, Gloucester ♦

Could this be related to the half-toning problems that have arisen previously? Some fonts do not contain all the necessary information to print. This can sometimes be solved by setting half-toning to 'graphics only' via the printer configuration window.

(If it is the Zapf Dingbats you want rather than the Zapf Chancery, there is a font called just Dingbats that doesn't suffer from this problem. Ed.)

Matthew Hunter, NCS ♦

Hints and Tips

CC Turbo Driver v4 – I'd like to pass on to other Archive readers some answers that I received from CC.

1) The command `*Printer$BlackScale` is no longer supported by the v4 TurboDrivers; instead, CC offer "sophisticated colour correction tables"; those for HP printers are "shortly" to be released.

2) The Turbo module which could be used in earlier versions of the TD to enable other printer drivers to use the dongled cable has been replaced by the program `!PrintQFS`, which is cunningly hidden within `!System.!CCShared`.

By the way, CC informed me that Style has reached version 3.07. Free upgrades from v. 3.04 can be obtained in the usual way – by sending in master disk 1. (Don't forget to send the return postage!)

Jochen Konietzko, Köln, Germany ♦

Fireworkz Pro – I reported some problems with version 1.20 to Colton Software and was told (in a letter dated 15th March) that the latest version, 1.20/50, fixes most of these problems. Version 1.21 "is due out in about three weeks". (Colton are currently saying, "it will be available during April". Ed) The upgrade procedure here is to send in both program disks – don't forget – return postage!

Jochen Konietzko, Köln, Germany ♦

Printing from text editors –

I mentioned, in my review of lottery packages, that one of them would not print on my LaserDirect, because it 'prints' to a null file instead of to the printer. I have now stopped trying to use Zap for the same reason. If I drag a text file to the printer icon (with Zap installed instead of Edit), it prints properly but if I try to print the document currently

displayed on the screen, it does not. I don't know whether this is a general problem or whether I have overlooked some control parameter.

Colin Singleton, Sheffield ♦

Many text editors, including both Edit and Zap, cheat when you try to print and send the data directly to the parallel port. This is fine if you have a standard printer, but if you use a different connection (e.g. serial or laser direct), the file will not be printed. Also, if you use a Turbo Driver, it is circumvented by Edit, so the text is corrupted. There are a couple of ways around this.

*You can save to a file and drag that to the printer icon, or try dragging the file from the save box to the print icon. This **should** have the same result and it means that you don't have to delete the file afterwards. With Zap, you can also press <shift-print> rather than <print> which will force the printout to go via the printer driver. Since Zap allows you to reconfigure the keyboard shortcuts, you can set <print> to print via the printer driver. (Choose Edit keys from the options submenu, find the print keymapping which, by default, will be set to Quickprint and change it to Printfile. Save the keys file and choose Reload keys again, from the options submenu for the change to take effect).*

Matthew Hunter, NCS ♦

Wolfenstein bugs – A few days after I had sent my Wolfenstein hint (Archive 8.7, p.12) to Paul, I found that sometimes the saved files remained open even though the !Cfs.!Run file was not. I turned to PowerSlave for help and this is what Eddie Edwards told me:

There is a bug in Wolfenstein's code which means that the files are only closed when the current directory is on the same filing system as Wolfenstein. Since I use ADFS and SCSI, this would often not be the case.

The recommended remedy is to add, at the start of the !Run file, a `Dir<Obey$Dir>` command.

This fix seems to work perfectly.

Another problem I have is that Wolfenstein always kills my computer's beep. This bug can be fixed by adding:

Channelvoice 1 MyVoice

to the end of the !Run file.

Jochen Konietzko, Köln, Germany ♦

Norwich Computer Services' Repair Policy

Owing to staff shortage, very little repair work is now done on NCS premises and most of it is currently being done by Repair Zone, an Acorn Service Centre here in Norwich. If you want NCS to handle the repair and to be your point of contact, that's fine but we have to add an administration charge to the price that Repair Zone charge us. Also, as Repair Zone are not VAT registered, if you come through NCS, we have to charge you an extra 17.5%.

For example, if a repair costs us £40 and we add a £5 admin charge plus VAT, that comes to £52.87, so, it would make good sense for you to go straight to Repair Zone (or Avic Electronics for fixed-price repairs – see the advert on page 17). That would also help us because we cannot make a profit from handling repairs, so it just represents a drain on our resources as things stand.

We will, of course, continue to handle all warranty repairs ourselves. ♦

Puzzle Corner

Colin Singleton

I have been inundated with Lottery Packages recently (well, four anyway), but no further help with my minimum-entry problem. Anyone attempting last month's pangram puzzle might try looking in old issues of the Guinness Book of Records, and see if they can gain a place in that publication by improving on the two published offerings.

Here are this month's two puzzles...

(13) Multiple shifts

The number 179487 can be multiplied by four simply by moving the last digit to the beginning. $179487 \times 4 = 717948$. Can you find the smallest number possessing this property? If you manage that, can you find the smallest such numbers for any other integer multiples? Some are fairly easy to find, some are not, so please send any solutions you find!

(14) Very acute

A simple geometrical question. What is the smallest number of acute-angled triangles into which a square can be dissected? An acute-angled triangle is one in which all three angles are less than, not equal to, 90° . I seem to recall this problem being posed by Martin Gardner in his column in Scientific American in the 1960s, and discussed in our personal correspondence, but I don't recall anyone proving a minimum solution. So send the best solution you can find. After studying this frustrating puzzle for a while, you may find yourself asking, "Why didn't I think of that earlier?"

... and a couple of 'unofficial' quickies (?) to test the water...

(a) Without calculating either, which is larger, the tenth root of ten or the cube root of two?

(b) Thirty-two snooker players of equal strength, including Smith and Jones, have entered a knockout tournament. What is the chance that Smith and Jones will play each other at some stage?

...and last month's two solutions...

(11) Prime square

A four-digit prime must end with one of the digits 1, 3, 7, 9 – hence the numbers in the right-hand column and the bottom row must contain only those digits. There are 22 numbers (11 reverse pairs) composed of these digits which are primes and the reverses of primes. The rest is trial and error, probably by computer. The solution shown is unique, apart from its reflection about the main diagonal.

1	9	3	3
1	2	8	3
9	5	5	1
3	7	1	9

(12) Anagram dictionary

I don't think there is much doubt about the first three entries in the anagram dictionary. They are, aa and aaaaabbcdrr. Aa, derived from Hawaiian, is a type of volcanic lava. Aaaaabbcdrr, in case you hadn't realised, is the anagram dictionary entry for Abracadabra! This is the word with the largest number of As.

My answers for the last three were ttutuy, ttu, and ttuu. These represent tutty (crude zinc oxide), tut (equivalent to tut-tut, which is not allowed in this puzzle because it is hyphenated) and tutu (a ballerina's skirt). I have since discovered, however, that Chambers Dictionary includes tuzz (a tuft of hair), and the OED also lists the related words tuz and tuzzy. These would appear in the anagram dictionary as tuz, tuzz and tuyzz, which all follow ttuu. These words are highly obscure, and probably obsolete, being apparently based on just one occurrence in English Literature (by Dryden, in 1693). I therefore propose not to adjudicate between the two sets of three words, and will accept tuzz and its variations as 'optional'.

...and congratulations to the previous month's two winners...

(9) Egyptian fractions – Winner – John Banks of Rickmansworth, whose program is included on the monthly disk.

(10) Magic hexagon – Winner – Robert Newmark of Sunderland.

Comments and solutions

Two more repeat-winners. Surely there must be more puzzle addicts out there? Please send your

comments, contributions and solutions (including the quickies) to me at 41 St Quentin Drive, Sheffield, S17 4PN. Solutions to me by **Friday 12th May**, please. ♦

Pocket Book Column

Audrey Laski

After all the negative reporting of Acorn matters, rightly complained about in recent issues of *Archive*, it was pleasant to see the Pocket Book getting a very good press in an article on home/school computing in *The Observer* in February. John Davitt, the author of the article, suggested that the Acorn Pocket Book might be the "Trojan mouse" (his words) to bridge the home-school divide, and reported the experience of a fifteen-year-old girl pupil at the Lord Grey School in Milton Keynes, who keeps her Pocket Book by her while watching television so that she can type notes on interesting science programmes and download them at school. She was also quoted as preferring to use the Pocket Book to her family's PC because the PC's 'hard drive is full, and it's very slow and has printing problems.'

An outbreak of worms

Writing, appropriately, from a veterinary clinic in Stocksfield, Northumbria, Christine Shield reports that her Psion 3 has worms. 'Black vermiform tightly-bunched lines are appearing within the screen ... they are opaque, present even when the screen is switched off, and they obscure the display.' This seems a serious problem which I have not heard of before, and I wonder if any Psion or Pocket Book users have any experience or information which could be useful to Christine.

Pocket Book uses – A portable librarian

David Wild writes of the way he has been using his Psion 3a in association with a Squirrel database on his A540 to catalogue his collection of books, 'which is threatening to take over the house'. To avoid carrying books to the computer, he transfers the

information via the Psion, where he has created three database files, Booklist, containing all the books recorded to date, Newbooks to receive new entries, and Bookmast, a write-protected file containing a record template. (Incidentally, is there an agreed name for such a dummy database file, invaluable for avoiding having to edit the Cards labels every time? I've heard it called a descriptor file but is that the official name?). He can then transfer Newbooks to the A540 via the A-Link, edit it appropriately and import it into Squirrel. Merging Booklist and Newbooks gives him an updated Booklist on the Psion, useful for simple searches in a bookshop, while a copy of Bookmast becomes the new Newbooks.

He mentions some problems and wishes. When using the facility to copy text from one entry to another, there is a danger of material turning up on the wrong line if there have been empty lines in the copied text. There is a warning about this in the Pocket Book manual. It would be good to have a facility to copy individual records from one file to another, and 'a facility to create a new file with the labels of the old one, but no records or, failing that, a bulk delete program which would let you copy a file with a new name and then empty it.' Bulk deletion would obviate the need for the dummy file.

Pocket Book uses – Managing charity

Several months ago, I made a couple of enthusiastic mentions of John Whiting's Outline, one of the programs available from 3-Lib. Recently, I've found a new use for it. Like many people, I manage my small contributions to charity via a Charities Aid Foundation account, contracting to pay in a certain amount each year which then gets topped up by the tax man, and writing CAF cheques to various charities. I wanted to spread these over a range of

issues such as development, human rights, housing, arts and others, and to achieve some kind of balance between these, but it was hard, over the months, to keep track. Now I record the cheques in an Outline file under appropriate headings as they go out, and can easily see whether some areas are much more neglected than others. Clearly, this kind of organisation could be applied to many other aspects of life.

Another quirk of Spell

Peter Young, of Cheltenham, who has discussed Spell in this column before, writes to note that, while the manual records its maddening habit of saving a word with its immediate punctuation unless you edit it out, it doesn't mention that it also insists on including punctuation when you use the Acorn-L option to get it to ignore a new word that you don't want to add to a dictionary. If the word is attached to different punctuation each time it occurs, it will

keep being queried. As he says, 'this is infuriating and there doesn't seem to be a way round it.' Does anyone know one?

He also complains of problems when trying to print semi-directly from the Pocket Book, usefully mentioning that 'you can't print from the Pocket Book (or indeed use the "Comms" application) when the Remote Link is on,' but referring also to more intractable difficulties. John, of the other side of the bed, is working on an article on problems of printing and configuration which, I hope, will deal with his and other readers' difficulties when it comes through.

Contrite dunce's endnote

I was sent, via Archive, an enquiry about a plotter problem, and I've somehow managed to lose it before recording the writer's details. If there is someone out there waiting for such a problem to be raised, please forgive me and write again. ♦

The Engineer Speaks

Ray Maidstone

How to 'wring' your A3000!

In last month's comments on the A3000 RAM expansion intermittency test, I told you to 'wring' your machine! This is achieved by placing something like a cassette case under the front right hand corner of the computer, pressing gently down at the front left and rear right hand corners simultaneously, and watching the monitor for adverse effects. It is **not** necessary to disassemble the machine to see the symptoms and you don't need to press very hard!

A4 battery usage

Further to last month's comments about A4 battery usage, it is possible to confuse the A4 if you reinstall the battery when the machine is switched on in mains condition, or if you allow the PSU to become unplugged. It is a bit of a grey area, but I would recommend switching off the machine *before* fitting a battery. It is advisable to screw in the mains plug adaptor retainers.

System life, heat...

Is it better to leave equipment on all the time or only to switch on when needed? The full answer is complicated. Basically, the various components that go to make up a computer system all have different needs.

- ♦ Hard drives wear out in proportion to the time they spin, although, with modern drives being able to spin down, this is no longer a problem.
- ♦ Switch mode PSUs don't like being left on any longer than necessary. They have to handle rectified mains – typically 400 volts DC – with the odd spike thrown in for good measure! They warm up nicely, overheating the smoothing electrolytics, which deteriorate over the course of time.
- ♦ The computer pcb itself basically comprises a processor driving some RAM, and this is designed to go the distance.
- ♦ Monitors have a switch mode PSU (covered above), and an EHT unit delivering the tens of thousands of volts needed to give you a picture.

New style monitors have EHT cut-off, so this problem is only relevant to older models. Screen savers don't really help much in prolonging equipment life as they are primarily to stop phosphor burn of repetitive screen displays, and this effect is sometimes undesirable to certain parts of the EHT circuitry.

So, I would advise that if you can organise your computer use to two well-spaced sessions a day rather than just leaving it on, this would reap eventual rewards in longer life of the equipment. (E.g. give your computer the same lunch-break that the employees expect!) If you are a company always needing instant access, you have no choice but to leave the equipment on most of the time... and pay the eventual repair bills!

... and cooling fans

With the exception of Morley external hard drives, all equipment containing a fan suffers in the

following way. The speed of the slightly imperfect plastic fan blades is too high for the air to flow smoothly over its surface, so the blade makes a noise as it breaks the air. As there are so many blades, you end up with a rushing noise. To provide cooling for power supply heat sinks and hard drive cases, requires air change at a steady rate, but it doesn't need a Harrier Jump Jet air fan! The airflow actually needed for complete cooling safety is achieved long before full fan speed, which is why we came up with our fan quietener many moons ago. It had the twofold effect of less noise and more efficient airflow. As the fan moved the air more smoothly, less dust ended up in the filters and various parts of the machine, particularly the floppy drive. This does not apply to Acorn alone.

(For details of the fan quieteners, phone RepairZone on 01603-400477.) ♦



TableMate 2 is the latest version of Dalriada's TableMate tabling utility. TableMate 1.1 has been bundled with Impression Style and Publisher.

TableMate 2 brings:

- Word wrapping within cells
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Acorn User, December '94:
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TableMate 2

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DiagramIt

Gerald's Column

Gerald Fitton

First some comment about Fireworkz Pro and then to my monthly discourse on a more general subject. What will it be about this time? Wait and see!

Fireworkz Pro

Each month, I try to classify the letters I receive by subject so that I can discover what is topical. There is no doubt about the top-of-the-list subject for this month. It is Colton Software's recently released Fireworkz Pro. Letters range from requests asking me to help with the creation of an unusual type of document starting with "How can I ... ?", through wish lists for the next version, to massive detailed comparisons with earlier Colton Software products.

So far as help goes, where I know how to do something, I am only too pleased to help – but please send me your problem with a disk example, self addressed label and, if possible, return postage. In some cases, it is not possible to do the thing you want to do, at least not in the way you want to do it. In many of these latter cases, I have found that you're asking me the wrong question. This is because you have already made up your mind how you are going to do something – then you find that Fireworkz won't do it your way! Often, when I find out exactly what you're trying to achieve, I can suggest an alternative approach which not only works but is usually much better and simpler to execute. However, I must admit that there are some occasions where I'm no help at all!

Let me turn now to your praise and criticism of Fireworkz Pro. I think the fairest thing to say is that your reactions are mixed; an even better description is that your views are polarised. I have to generalise and, as with all generalities, there are exceptions. In general then, those of you who have come to Fireworkz Pro directly (without the intermediate stages of Wordz, Resultz and Fireworkz) are most impressed and those who have taken the long road

For new users,
Fireworkz Pro
is an excellent
package

with Colton Software from PipeDream 3 (or 2), through PipeDream 4, Wordz, Resultz, Fireworkz and now to Pro are generally the most disappointed.

If, like me, you have used Colton Software's products for a long time, let me ask you to step back and look at Fireworkz Pro from a distance. The fact that new users are impressed and like the package is because (a) learning to use it is relatively easy and (b) it has many excellent features you won't find elsewhere. In the first draft of the Fireworkz specification, what these days is called a 'short learning curve' was high on the list of priorities. A second important part of that specification was that it should have more useful features than any similar package. To my mind, the positive reaction of new users to Fireworkz Pro shows that these two major objectives have been achieved. For new users, Fireworkz Pro is an excellent package – and they say so!

So why are we long-term Coltonites disappointed? Part of the reason is that we expected something better! When PipeDream was launched it was unique. It was by far the best spreadsheet for the Archimedes and, what's more, it could be used as a word processor and simple database as well! PipeDream has so many features that, even with many years of experience, aficionados are still discovering short cuts and methods of improving the way they use it! A long time ago, I said that, with PipeDream, you can do things which are impossible with other packages. That is still true.

I think we all expected that Fireworkz would have all the good features of PipeDream plus many more. It hasn't happened because, in changing to and concentrating on a page-based layout, styles using fonts, variable height rows, variable width slots and button bars, some of the versatility of PipeDream has been lost – if only temporarily. From my correspondence, the three features of PipeDream which are missed most are keyboard shortcuts, command files and fast character printing (using PipeDream printer drivers).

There is good news; I am assured that, in some future version, the first two of these three features

will be added; the underlying structure of the program code is there, it just needs refinement. I'm sure many of us look forward to the day we can use these highly desirable features. Although fast character printing is possible from Fireworkz (through Acorn's RISC OS drivers) many with experience of PipeDream find it too difficult to get to grips with it properly. For others it does work!

Apart from loss of functionality (such as that I've just described) perhaps the greatest complaint from ex-PipeDream users is that Fireworkz is slower. I've also received reports that, with some machine and spreadsheet configurations (but not all), a direct comparison of Fireworkz and Fireworkz Pro shows the latter to be noticeably slower. In word processing mode, unfavourable comparisons are made with Style and Publisher. One thing we can be sure of, Colton Software are acutely aware of this complaint and are working on it.

The most serious criticism of Fireworkz Pro which I've received is that the integration of the card database is nothing like as seamless as Colton Software devotees expected from the company which created the leading integrated package. Most of us expected that we would be able to mark a block in a Fireworkz spreadsheet containing, say, names and addresses and, with a few deft mouse clicks, convert the marked block into database format. Disappointingly, it is necessary to use an intermediate CSV format file. I have spoken to Mark Colton about this and I've been assured that a 'Make database' command (from a marked block in a Fireworkz spreadsheet) will be included in the next version of Fireworkz Pro.

So what is my summary of Fireworkz Pro, not for those new to Colton Software (who are generally most favourably impressed) but to long term devotees (who are generally disappointed)? Yes! It has bugs (more than you and I expected at this stage); it lacks features which PipeDream has and which you believe you need; it is slower than you'd like it to be; the database feature is not as seamlessly integrated as you expected it to be.

In spite of these deficiencies, my advice is that you should wait a while before scrapping your investment of time and money in Fireworkz Pro and

looking for something else. The grass might look greener on the other side of the fence – a new package might not do what you want. My view is that Fireworkz Pro has the makings of a good integrated package – all it needs is improvement!

So, in the meantime, what should you do? Colton Software have a reputation for listening to their customers' criticisms, particularly those who they regard as 'family' (the word they use to imply a long term commitment between them and their faithful users). So, if you are disappointed, don't give up, write to them with your suggestions for improvements. I'm sure that they'll listen and that when the next version is released, you'll be pleased that you did.

Finally, if you are about to buy Fireworkz Pro, don't be put off by these criticisms I have voiced. My information is that, by the time you read this (or shortly afterwards), there will be a new release which will have the most annoying and mystifying of the bugs removed.

Topic Number 2 – Introduction

One of the questions I am asked with increasing frequency is "Why should I buy an Archimedes (for my next machine) rather than a PC?" Most of the people who ask this are not intending to buy a PC; they've already made up their mind to buy an Acorn machine. Their difficulty is that they are being confused by facts thrown at them by PC users, and what they need is reassurance that the decision they've already made is the right one.

... there are three types of 'nasty'...
...only one of these is correctly called a virus.

I give different answers to different people. These range from considerations of the price of comparable software, to the way in which all packages and utilities (including Style, Draw and the Acorn Font manager) work harmoniously with each other to make the whole system greater than the sum of the parts. However, there is one type of user for whom I have a more unusual answer. Those users (a) receive a lot of software on disk or over the phone and (b) send software to others.

To these people, I sometimes say that one big advantage of buying Acorn is that: (a) it's much harder to catch a virus (b) the viruses generally do less damage (c) there are fewer viruses and the ones that exist are well documented, and (d) the cost of keeping your system clear of viruses is much less.

The PC has an operating system that has to be held on disk (the Acorn machines hold their operating system in ROM) and when it gets infected, you're in real trouble. There are many PC viruses and the degree of protection which you can get depends upon how much money you can afford. Some commercial organisations using PCs (who *must* keep free of viruses) spend hundreds of pounds every year on anti-virus utilities. On an Acorn machine, you can get a better degree of protection for less than £30 a year than you can by spending hundreds of pounds a year on protecting a PC.

What is a virus?

Referring to computer systems in general, there are three types of 'nasty' which you catch – only one of these is correctly called a virus.

The first is more correctly called a Trojan Horse. These nasties masquerade as one thing, probably something useful, but do something nasty as well. An example of such a nasty is a utility which you install so that your backspace key (just to the right of the £ key) deletes backward but the <Delete> key deletes in the forward direction (just like <Copy> does in Style). You might install such a utility because you think it's useful. Another useful utility is one which grabs the screen as a Sprite. Of course, the Trojan Horse utility you buy does work and does exactly what you installed it to do. What you won't discover until it's too late, is that it does something nasty as well. (See below for nasty things which can happen.) Usually, the Trojan Horse doesn't make copies of itself and you have to be running it before it can do its dirty work! In the Acorn world, there are Trojan Horse types of nasty.

The second type of nasty is more correctly called a Worm. If you have a Worm in your system, you probably have only one. If you have a network, it might move around on the network. On a stand-alone machine, it may move from one package or data file to another gobbling up bits of program or

data as it goes. Most Worms don't reproduce. As far as I know, the only Worm nasty on Acorn systems operates on networks and not stand-alone machines.

The third type is the true Virus. If you have one, you'll soon have many copies spread throughout your hard and floppy disks. Generally, the Acorn viruses are stand-alone relocatable modules or they are lines of code added to existing modules. An example of a module is the Colours (ColourTrans) module which you'll find in your !System directory. Modules such as Colours can be infected by having a virus added to it.

Some stand alone viral modules have a Sprite filetype, some the Data filetype and others the Basic filetype – but they aren't what they seem! They are modules written in machine code. As a general rule, the viral module (or the legitimate module which has been infected) is called into action by adding an extra line to a !Boot file. What the module does is to reproduce itself and place a copy of itself in another package's directory. For example, a copy called from within the !Style directory might be placed in the !Fireworkz directory (and the !Fireworkz !Boot file modified). When you switch on next time and run the !Fireworkz !Boot file, the copy (from within the !Fireworkz directory) will be copied somewhere else (e.g. into the !DrawPlus directory). In the meantime, as well as making copies of itself, the virus will do something nasty.

What do viruses do?

From here on, let me concentrate only on those viruses which can affect an Acorn machine.

Nearly all Acorn viruses enter the user's system through packages (which Acorn call applications) rather than through data files. So something starting with a '!' such as 'Style' can be infected whereas something such as a ReadMe file is much less likely to be infected.

Some viruses have a trigger date which is activated by the real time clock in the Archimedes. Until then they do nothing except reproduce themselves so that, by the time something happens, you will probably have multiple infections.

Some viruses change the datestamp of a file so that when you upgrade by dragging a new version of,

say, Colours, over the old one, the old one fails to be overwritten because its timestamp is newer than the new version of the file! I've known many people who've failed to upgrade their !System modules because of this type of virus.

Other viruses only do nasty things now and again. For example, they may do something nasty only when it's the 13th (or 113th) time you call them. Once again, you can have these viruses for a long time before anything nasty happens.

Some viruses do simple things such as grabbing memory every time you load a file; the result is that you seem to use up memory far too quickly! Others do very nasty things; there is one which will format your :0 floppy disk (unless you've write protected it); another will delete part of a data file (and you won't notice it until you reload it and find that it's corrupted); there is one which modifies your configuration or your (switch on) !Boot file – so that your !System directory can't be found!

Some history

Both as an author for Archive, and in running our User Groups, we receive and send out many disks. It would cause us no little discomfort if we contracted a virus; it would be disastrous if we sent out a batch of disks containing a virus. Although we haven't done it yet (and I hope we never will) many magazines, including Archive (a long time ago) have had the misfortune to send out a virus infected disk.

My recollection is that, at first, Acorn ridiculed the idea that viruses could exist on the Archimedes. Even when the first ones appeared Acorn (in my view mistakenly) tried to keep the lid on this information, since they thought it might cause a panic. When the news broke, it did!

Acorn developed the first Virus protection utility for their machines and then hastily appointed (if that is the right word) a company called Pineapple Software to continue further development.

What do we do?

For our part, we subscribe to the Pineapple protection programme. This Acorn-approved scheme costs less than £30 a year. As part of this protection programme, we receive about four disks from Pineapple each year; these disks contain the

latest version of a virus detection and remover utility called Killer.

When any of you send me a floppy disk, I write-protect your disk (so that I can't infect it) and then I always run !Killer over it before I click on the :0 disk drive. If I find anything nasty on your disk, I let you know right away – by 'phone if possible.

You will appreciate that !Killer can protect me only from known viruses (i.e. viruses known to Acorn and Pineapple); however, the module VProtect (part of the protections system), which I always load at startup, is much better since it prevents my machine becoming contaminated with the most common types of unknown viruses (ones which load through an Obey file such as !Boot files). I do realise that there is still a chance of infection but I have no doubt that I am using the best virus protection available for the Archimedes.

Write-protect all incoming disks before you insert them in your machine.

I keep the masters of my packages (such as !Style) write-protected and I keep back ups of all my data files. If my system does get infected (it hasn't yet), I can rebuild it from the master and backup disks.

What can you do?

Ideally, subscribe to Pineapple's virus protection programme. Write-protect all incoming disks before you insert them in your machine. Keep only packages (not data) on your hard disk. Keep data files on floppy disk. Keep a backup copy of all your data files.

If you do those things then, if an unknown virus strikes, you will be able to rebuild your system from the master disks and from the backup data files.

Enquiries about the operation of !Killer, and administrative/sales enquiries (e.g. area/site licences) should be made to Pineapple Software.

An interesting example

Recently, one of my correspondents (who wants to remain anonymous), contracted a version of the Module virus. He tried unsuccessfully to kill his viruses with !Killer and, in desperation, asked for

our help. We did help him and we asked him to write a few words on the subject.

He writes: "I had !Killer installed on my hard disk and I managed to get it to run but it failed to find a virus I was sure I had. When I finished checking my hard disk, all the signs and symptoms of viral infection, including a message from the virus, were still there, indeed the situation was worse than when I started. Gerald suggested that I look in my System.Modules directory. I did and found that the virus had datestamped many of my modules.

I decided that I must have an unknown virus but Gerald had a different idea. I was wrong – he was right (as usual)! What had happened was that a System module needed by !Killer was infected and was (a) preventing !Killer doing its work and (b) infecting everything else! With Gerald's help, I put together a 'killing system' on a write-protected floppy disk which removed over 90 copies of the virus off my hard disk. The moral of this story is to keep an infection-free copy of your !Killer on a write-protected floppy, together with an infection-free copy of all the !System modules it needs."

The PC Emulator

The PC side of the Archimedes can contract PC viruses. You can't kill PC viruses with !Killer. If you receive and send out much PC material, you are likely to get your PC side infected with a PC virus. If you decide to go for protection, it will cost you lots of money. If you still insist on using the PC emulator, make sure that you can rebuild your DOS, Windows and PC Packages from the original master disks.

There is an alternative to buying expensive viral protection for your PC side. My son, who works professionally in the PC world, suggests that everyone who uses a PC should reformat their hard disk and install all utilities, packages, etc from the master disks every six months (or more often if it's important to remain virus free). He says, "Keep only packages, etc, on the hard disk; keep data on floppies! That way you'll be able to rebuild your system at any time you think you might have been infected."

I think he's right and that, in the case of the PC, reformatting and reinstalling from (write-protected)

master disks regularly is the most cost-effective method of keeping a PC system clean. I know that many of you will disagree – I can only give you the opinion of myself and that of my son.

In conclusion

Contracting a virus is a traumatic experience; it can happen to you. If it does, don't jump to the conclusion that it has only just happened and blame the last disk you received.

If you don't have protection then, when you catch the virus, copy any unique data files (as far as I know data files can be infected only with a worm) from your

hard disk onto floppies, reformat your hard disk and then reinstall all your packages from your (write-protected) master disks. Alternatively, telephone Pineapple and order Killer on your credit card.

PipeDream and the Risc PC

Is there a problem? I still don't have a Risc PC yet, so the following is second-hand. The Risc PC doesn't use the system font but an outline font which you can choose for yourself. I've been told that, when the row numbers exceed 99, the leading numbers are lost so that row 1234 will appear as 34 (without the 12 in front). If you have found this to be so, and particularly if you have any solution or advice for a work-around, please write to me.

(Yes, it is a problem, although I get three out of four characters and, no, I don't have a solution. Sorry! Ed.)

Finally

You can write to me at the Abacus Training address given on the back cover of Archive; it is quicker than writing via the Archive office.

If you write to Colton Software about Fireworkz Pro (or PipeDream and the Risc PC or anything else) then please let me know how you get on.

And (but not as an afterthought) thanks again for all your letters; they're always good fun to read! ♦

**Contracting a virus
is a traumatic
experience; it can
happen to you.**

HolyBible from ExpLAN

Gabriel Swords

I've seen some quite impressive Bible programs in my time, but I think HolyBible could be the one to beat them all! Certainly, there is nothing on RISC OS to beat it but there are many Mac and PC programs which HolyBible leaves standing.

What you get...

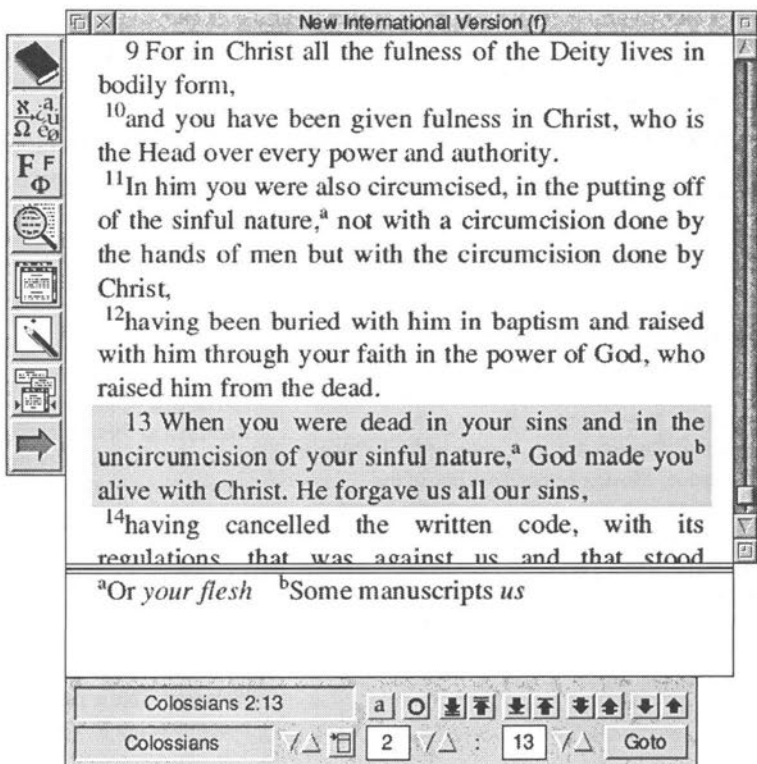
The HolyBible 'base pack' comes on six disks, made up of the **Installer**, the **HolyBible application** (400Kb); the **King James Version** of the Bible (2.7Mb) and **Strong's Lexicon** (3.2). The software is compressed onto High Density (1.6Mb) disks – if your machine can't read HD disks, ExpLAN will exchange them for 800Kb disks. The package needs to be installed using the installer and although you do not have to load all three items, you do need to have the base pack before you can go on to purchase/load any of the other modules, available separately.

The final manual isn't ready yet so you only get a photocopied one – the printed manual will be sent later, free of charge. At the moment, the only other module available is NIV but the NSRV, with study notes, and the Russian version, with Cyrillic font, are going to be available within a couple of weeks or so, we hope.

Installing is straightforward enough, providing you don't get confused with the first installer window – it shows you a window

with two apparently writable fields (Application Path and Font Path). Naturally, you feel the need to put something in them, but you can safely ignore them until a bit later – just follow the on-screen instructions and carry on.

*(I had a problem installing mine in that the instructions said – yes, I do read instructions – that when a particular logo appeared, you had to drag it to a directory. I tried in vain to drag this icon but it wouldn't drag. I quit and started again – still no joy. Eventually, I realised that this wasn't the right icon – yes, it **was** a picture of the Bible but it didn't have an arrow on it – but as it was the first time I had seen the icon, I could be forgiven for thinking that this was the draggable one! Could you make it clearer for wallies like me, please, ExpLAN? Ed.)*



Once it's installed on your hard disk, you're ready to go. Double click and it loads, very quickly, onto the icon bar. It loads quickly because what you actually load is the HolyBible application which is only 400Kb – the rest of the program works by accessing the hard disk. Surely, that must slow things down, I hear you say. Not so.

In fact, the first thing you notice about HolyBible is the speed at which works. In single word search mode it will look through the whole Bible in about five seconds. Even complex search strings take only a few seconds more. Scrolling up and down takes no time at all – and it can be speeded up by holding down <adjust> while you scroll. In fact, the whole thing works extremely fast – even on my old A5000. With a faster processor and hard drive, HolyBible fairly zooms along.

The display

When you click on the HolyBible icon, a scrollable window appears, with a tool bar to the left and an info bar on the bottom. The default window is Genesis 1, with verse 1 highlighted in a grey background.

The info bar

On the left of the info bar there is information about the current book and verse. The current verse is known as the 'active verse' and is always highlighted for easy reference. Below the book and verse reference is the **Choose book** menu and up/down arrows for selecting a new chapter or verse. The book menu, rather than being divided into individual books, is divided into book categories – Pentateuch, Historical, Poetical, Major Prophets, Minor Prophets, Gospels & Acts, Letters of Paul, Other & Revelation. Moving across from one of the categories gives you access to submenus listing individual books. This type of submenu saves a long 'font-type' menu but causes you to pause a moment while you remember which category your book is in – personally, I would prefer a long book list, but I can cope! When you choose your new reference, you press the **'Goto'** button for almost instant movement to the new location.

Also on the info bar are 10 buttons. Eight control the up and down movement of the page – you can move by a single book, chapter, page or verse at a time. The arrow keys, and the page up, page down keys, give similar results. Of the final two buttons, one allows you to toggle the footnotes – off, separate from the text, or embedded within the text – and the other button gets you back to the active verse, if you have scrolled away somewhere.

The tool bar

The tool bar consists of eight buttons. The top button gives the same access to books as the Choose Book menu on the info bar. The next button allows you to switch between available versions, in my case, the King James Version and the New International

Version (this is also available from the mouse menu). The third button opens a window giving access to font information – the **Choose font tool**, or **Style**, as it's called on the mouse menu. Here you can change the main text font, as well as the bold and italic styles. At the same time, you can alter the font size, aspect and colour. You can also change the background and highlight colours.

The next button opens a **Search tool** dialogue box (this can also be opened using the mouse menu button, under

Utilities, or by pressing <F4>). It gives you four search options: single word search, AND, OR and NOT, and you can also use wildcards in your search. You can search all books, the current book, sections or an editable range of books. The search can be case-sensitive and, once found, verses can be displayed as they are encountered, listed together at the end of the search or simply counted. The search doesn't do everything you might want, but it's fast, and I gather that ExpLAN are working on a new version of the search module which could answer any criticisms you might have about its inability to search easily for phrases, like 'In the beginning...', but more on this next month!

Button number five opens another window on the bible text. This is called the **linked version**, and becomes active as soon as you open it. It's exactly

On screen, HolyBible is designed to look like a page from the Bible, both in layout and in the way verse numbers and footnotes are incorporated.

The screenshot displays the HolyBible application with two windows open: 'New International Version (f) (*)' and 'King James Version (f) (*)'. The NIV window shows 1 Corinthians 15:1-11, and the KJV window shows the same text. A toolbar with icons for search, zoom, and other functions is visible between the windows. Below the KJV window, a 'Strong's definition for word 'Cephas'' window is open, showing the Aramaic origin and other details for the word.

New International Version (f) (*)

3 For what I received I passed on to you as of first importance:^a that Christ died for our sins according to the Scriptures,
⁴that he was buried, that he was raised on the third day according to the Scriptures,
⁵and that he appeared to Peter,^a and then to the Twelve.
⁶After that, he appeared to more than five hundred of the brothers at the same time, most of whom are still living, though some have fallen asleep.
⁷Then he appeared to James, then to all the apostles,
⁸and last of all he appeared to me also, as to one abnormally born.
⁹For I am the least of the apostles and do not even deserve to be called an apostle, because I persecuted the church of God.
¹⁰But by the grace of God I am what I am, and his grace to me was not without effect. No, I worked harder than all of them—yet not I, but the grace of God that was with me.
¹¹Whether, then, it was I or they, this is what we preach, and this is what you believed.

The Resurrection of the Dead

12 But if it is preached that Christ has been raised from the dead, how can some of you say that there is no resurrection of the dead?
¹³If there is no resurrection of the dead, then not

^aGreek *Cephas*

King James Version (f) (*)

scriptures;
⁴And that he was buried, and that he rose again the third day according to the scriptures:
⁵And that he was seen by Cephas, then by the twelve:
⁶After that, he was seen by more than five hundred brethren at once; of whom the greater part remain to this present, but some have fallen asleep.
⁷After that, he was seen by James; then by all the apostles.
⁸And last of all he was seen by me also, as by one born out of due time.^a
⁹For I am the least of the apostles, who am not worthy to be called an apostle, because I persecuted the church of God.
¹⁰But by the grace of God I am what I am: and his grace which [was bestowed] upon me was not in vain; but I laboured more abundantly than they all: yet not

1 Corinthians 15:5
 1 Corinthians 15 / 15 / 5 / Go to

Strong's definition for word 'Cephas'

2786 Cephas [kay-fas']
 of Aramaic origin of 03710; TDNT - 6:100,835; n pr m
 AV - Cephas 6; 6
 Cephas = "stone"
 1) another name for the apostle Peter

the same as the original, and appears on screen alongside it. Once it is opened, you can work on it independently of the other. So, for example, you can scroll through it without affecting the other copy, but as soon as you click on some text, and make a verse 'active', the other version automatically catches up with where you are. As you move from one verse to another in the active version, the linked version moves with you. This is particularly useful if, say, you have changed the active window to NIV and the other window is KJV. It allows you to compare the two versions quickly and easily. With enough memory, and as more versions become available, you could have three or four versions on the screen simultaneously. Surely, there's no excuse now for misunderstanding what a particular verse means!

Display notes is the next button. You can write your own notes about individual verses and save

them to disk. Once a note is written about a verse, the verse is 'tagged' for future reference. The tags disappear when the note pad is closed, and reappear when it is opened again. Once the notes have been loaded into memory and a verse has been made active, you can use 'display notes' to open the note attached to that verse. Notes can also be cross-referenced and exported. Not only can you write your very own Bible commentary, but some enterprising third party, or ExpLAN themselves, could provide Bible commentary modules!

Reformat text re-formats the text display after scrolling – this is only needed if automatic re-format isn't set in **Choices**. The final tool is **Cross references**. In HolyBible, cross references are not what you might think – they are not the cross references you might find in your 'hard copy' Bible. These are references you either put in yourself or

which point to some resource elsewhere in the program. For example, you can create a **Bookmark** list and drag the cross reference icon to it to make a record of the active verse. Later, if you wish to go back to that, or other book-marked verses, you just double click on the verse reference and HolyBible moves the active window to that verse. This is potentially quite a useful option, so we'll look at cross references in more detail next month.

Mouse menu

The mouse menu brings up five options: **Version info**, **Export verse**, **Version**, **Style**, **Utilities**. Version info tells you which version you are using, its release number and the copyright information. We have already looked at Style and Version and both are available from the tool bar or info bar. The two new options are Export verse and Utilities. In Export, single verses or verse selections can be exported, either as plain text or, if you have Impression, as an Impression DDF (*document description format – an Edit file with textual descriptions of the formatting*). When a verse or selection is exported, the version, abbreviated book title, chapter and verse are also exported. The book is always abbreviated, but the Bible version can be either full or abbreviated.

Utilities

The only new option on the Utilities submenu is the Strong's dictionary and lexicon. This only works with the King James Version, and can only be launched from within that version window. Pressing <f8> displays the KJV with certain words underlined; these are the words which have a Strong's definition available. When you adjust-double-click on an underlined word, a Strong's definition window opens almost immediately. Within this window, there is information about the word on which you clicked. On the top line is the Strong's number and a transliteration of the Hebrew or Greek word, followed by its pronunciation. The next line shows the derivation of the word. The third line gives the translations of the original Greek word, and the number of times that particular word

appears in the Bible. There are usually other Strong's references contained inside most windows and these can also be launched from within an open reference. You can also launch a reference by typing in a Strong's number into the **Display Strong's definition** window, from the Utilities submenu.

Summing up

On screen, HolyBible is designed to look like a page from the Bible, both in layout and in the way verse

numbers and footnotes are incorporated. At the same time, you have control over how it looks by being able to change fonts, etc, so it doesn't have to stay the way it starts. The window is re-sizable, and the toolbox can be removed if you don't like it. It is well laid out with full use being made of Acorn's new-look buttons etc. It has a very pleasing feel to it – rather like Impression's Style/Publisher look. A lot of thought has gone into this program, not only in what it can do, but also in

the way it looks and behaves. It is very good now but, for the future, there is plenty of scope for additions and improvements. I like it very much and have no reservations in recommending it.

HolyBible runs on any Acorn 32 bit machine running RISC OS 3.1 or later. It requires a hard disk with at least 1Mb of space to install the base package and anything up to 3Mb per Bible version. Additional space will be required for maps and any other resources you acquire. The HolyBible base pack costs £80 through Archive and the NIV half module costs £28. REB, NRSV and Russian will be available at £52 each.

Next month

Next month we'll have a look in a bit more detail at some of the things it can do... including some of the Resources available from the icon bar menu. We'll also make some mention of the schools version soon to be available. In the meantime, if you already have a copy, and have been using it, send in your comments on how it works and what you think of it. I know it's still early days but you might also like to include a 'wish list'. ♦

A lot of thought has gone into this program, not only in what it can do, but also in the way it looks and behaves.

Textease

Chris Murray

Softease is a new company set up to write software for the Acorn platform. (This is encouraging in these difficult times.) Their first offering is Textease, a budget-priced DTP package. The authors themselves admit that they are not trying to compete directly with the likes of Impression Publisher for features but it is very easy to use, with lots and lots of features, some of which are unique.

The package

Textease consists of one disk and a 26-page A5 comb-bound user guide which contains an introduction, tutorials 1-4, quick reference guide and hot key summary. The main application comes encoded with a unique serial number and your own name – the software is not copy-protected. Also on the disk is a directory of tutorials, various examples of what can be done with the package, templates for a selection of Avery label sheets, two fonts from Skyfall (Friendly & Cooperblac), a piece of clipart from Desktop Projects and various borders.

Double click on the application and the icon appears very quickly on the iconbar, taking up 320Kb of memory (480Kb with the spell checker). A single click then loads a default document "untitled" and you are ready to begin typing straight away. There are no frames to be drawn or set up.

The interface

The software is very easy to use, with a button bar and information line. These can be turned off, if you wish, or customised to show only those icons you want. This button bar is "active" in that, if the window is not the full width of the screen, moving the pointer to one end of the bar slides the icons along to allow access to them all.

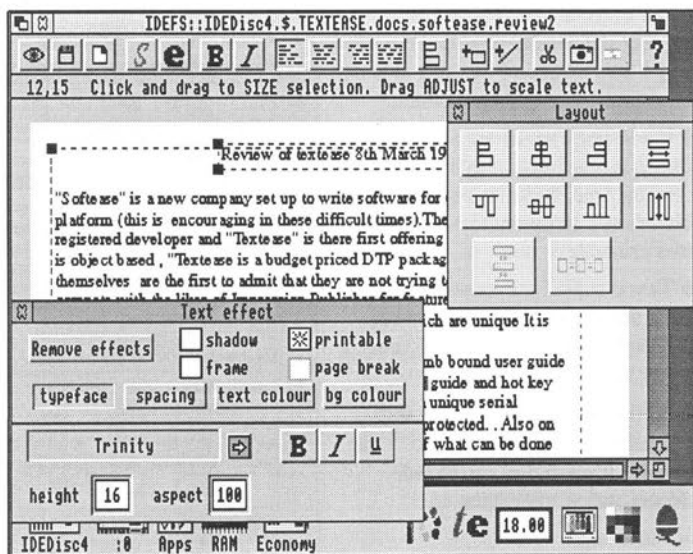
Text is typed directly onto the page or imported from Edit, FW+, etc. Drawfiles and sprites can be dropped onto the document, moved, resized and can have frame lines added to them. Drawfiles can be imported and set up to be borders. The view on screen can be scaled from 15% to 800% with a key shortcut to toggle back to the previous zoom setting.

Features

◆ Styles are used to bring consistency to the appearance of text. There is control over typeface (height, aspect ratio, bold, italic, underline) and spacing (text alignment, column width, first line indent, line spacing, paragraph spacing, tab and top/bottom margins). The colour of text and backgrounds can also be set.

◆ Empty style files can be set up and dropped onto a document to change all the styles in a file to some pre-defined requirement. An example of this on the supplied disk is a 1995 calendar, laid out in glorious colour. By dropping on a style file, it can be turned

Textease is very easy to use with lots and lots of features, some of which are unique.



to black and white ready for printing out on your mono printer. The effects option allows the same control as styles but over selected areas.

- ◆ Negative indents which indent lines not starting a new paragraph allow bullet lists to be created. I have found this feature very useful.

- ◆ Shadows can be added to text and/or frames.

- ◆ Frames can be click dragged to resize to a new width or, by using <adjust>, the size of the font can be automatically scaled to fit the new frame size. Frames are moved around in real time by click and drag.

- ◆ The date can be inserted automatically, along with different options for page numbering (sequential, folded and bound pamphlet). Various page sizes can be set, from A5 up to A0 (portrait or landscape).

- ◆ Headers and footers can be placed anywhere on a page and can consist of text and/or graphics. They can be set to appear on every page or alternate pages. This is excellent for making up a booklet where you want the page number or title always to be on the outside edge.

- ◆ Multiple views of the same document at different scales are available.

- ◆ Simple lines and rectangles can be drawn with control over line thickness, line type and the fill colour of rectangles. There is an excellent tool for aligning and spacing objects and, with only a little practice, I was able to create an assortment of grids and tables.

- ◆ Frame lines, which are not normally visible, can be made visible with control over line type, thickness and colour. There's also an option to have frame lines printable or not.

- ◆ Text is copied and moved around using the clipboard and you can cut and paste between different documents on the same screen.

- ◆ A "find and replace" facility uses replacement from the clipboard. It can include effects and so can include colours, italics, underlines, etc.

- ◆ Files can be saved as Textease, drawfiles, plain text (Edit format) or template format. In the latter, letterheads or blank forms can be set up ready to be loaded with live data and there is automatic renaming to prevent accidentally overwriting the template file.

- ◆ A word count of the whole document or selected areas is available.

- ◆ The XY coordinates of the pointer can be displayed on screen, which is very useful for setting things up.

- ◆ Automatic page breaks allow text to flow smoothly from page to page and it can be made to flow between frames, allowing quite professional documents to be produced.

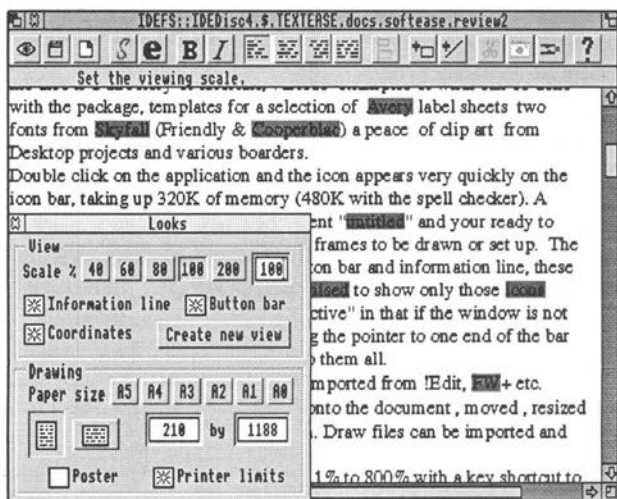
- ◆ If you get stuck, which is unlikely, there is a clue sheet icon always available.

- ◆ Standard Acorn keystrokes and fkeys are used but there is an option to change the fkeys to <shift-fkey> for use with the Penfriend application.

- ◆ All colours and lines from the spell checker, print boundary, paste marks, etc, can be changed to your preference, making the it very easy to customise.

Spelling

The spell checker is optional (£10 extra) and it can be turned off when not required. It is interesting in that it highlights on the screen, in a different



background colour, the words that are misspelt. (See the screenshot below.) You can even do a printout with the spelling mistakes highlighted – this could be particularly useful in schools.

The document can be checked as you type (with optional beep) or checked afterwards. Words can be added into a user dictionary. The spell checker is easy to use and, I believe, well-nigh essential nowadays, and certainly worth the extra money. There is a free upgrade for those who purchased early versions of Textease, although the spelling checker is £10 as an upgrade.

the spell
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use... ..and
certainly
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extra
money

Conclusion

My overall impression is that Textease is very easy to use and, at less than £30 inclusive (£40 with spell checker), it must be the best budget DTP around. It does not have all the bells and whistles or bundled software that the excellent Computer Concepts'

products have but it does everything that most people need for DTP. Schools will like it with its modern user interface and ease of use.

The ability to run on a 1Mb machine without a hard disk will also attract those with basic machines who want to produce well laid out letters, posters, booklets, etc and who have, like me, been making do with Draw for their DTP work. If you do not have a font-based word processor or DTP, I thoroughly recommend it. Get the demonstration disk if in doubt!

Textease is available from Softease at £39.50 inclusive or £29.50 or without the spelling checker. ♦

the best
budget DTP
around

(Because this is such a positive review, we have arranged a special discount for Archive subscribers – £35 for the with-spelling-checker version, for two months from publication of this magazine. This may not seem like a very big discount, but it is already very good value for money, so there isn't much margin for giving massive discounts. Ed.) ♦

Comment Column

Acorn awareness campaign

We are still getting quite a lot of response to our campaign to try to increase awareness that "Acorn is RISC". We have had people send us biased articles from:

Physics World (Feb '95 p69)

The Economist (4/2/95 p8?)

The Independent on Sunday (19/2/95 pp48,49)

and also some corrective articles and letters published in:

Computer Shopper (April '95, p589)

Physics World (March '95 p23)

The Economist (25/2/95 p8)

So, if you see an article or a letter in print that is, in your view, biased against Acorn, don't let them get away with it. Write to the editor and say why you think the article is biased – but beware of over-

stating the case, because they could accuse you of equal and opposite bias!

Ed. ♦

Black Hole (8.7 p57) – This utility looked useful, so I installed it and started to use it. Here are some comments as a result... I have shortened the names of my TinyDirs wherever possible to four or five characters so that I can crowd as many as possible onto the icon bar without it overflowing sideways. I have shortened the messages associated with the Black Hole icon, but it still occupies more bar space than the sprite needs. The others use only the space needed by the sprite, provided the name is short.

If, like me, you have Cfs running all the time, make sure the filepath of the bin (set using the Configure feature in BlackHole) is prefixed by Cfs#. Then all

files stored in the bin will be compressed. Worse, if you do not set this prefix, any compressed files dumped in the bin will be decompressed! Also, BlackHole includes an Ignore FS feature so that, optionally, files deleted in RAMFS, ADFS (Floppy), etc, will not be copied to the bin. Could we also have Ignore Directory (like the one in !Backup)?

Incidentally, files stored in the bin are identified by their filename only, not the full path, so if two files with the same name are 'binned' from different directories, only the second will be preserved in the bin. If you delete a directory full of files, the bin will contain the empty directory folder, side-by-side with the files it originally contained!

I will have great fun trying out twelve different screen savers, each with a string of variable parameters. Arrghhhh! A nasty little bug here. When I clear the Configure screen saver window from the screen – even if I have only looked at it and cancelled it – the whole machine goes dead and needs a reset!

I have set my choice of screen saver, and it works perfectly. Return to normal by hitting <escape> or touching the mouse, etc. Some of the screen saver displays seem jumpy, presumably because all the applications are still polling the Wimp in turn.

A question arises – if screen saver cuts in while a long job is running unattended, but with a changing screen display, will it keep going? The answer appears to be Yes. Screen saver obliterates the screen but does not stop the program. The up-to-date display can be revealed by touching the mouse.

Colin Singleton, Sheffield ♦

If you rely on the singularity feature to save your files then, when you choose delete from the filer menu, a delete directory containing files will indeed result in an empty directory side-by-side with the former contents. If, however, 'retain structure' is turned on in the configure window, and you delete the directory by dragging it to the Blackhole icon, the files will remain in the directory. (If the bin is on the same device as the files to be deleted, they will be moved rather than copied as well.)

I am unable to reproduce the crash from the screen saver configure window.

If you use the password feature of the screen saver, it will occasionally refuse the correct password preventing you getting back to your data! That is not a big problem, however, as several mouse clicks in quick succession will usually bypass the security anyway!

Matthew Hunter, NCS ♦

Digital Services – Although Digital Services have gone into liquidation, I understand after speaking to them recently by phone that Squirrel and other software will continue to be supported. Also, they appear to be attempting to sell off the software side to set up again.

Chris Hughes, Wakefield ♦

File transfer on PCs – The other day I needed to transfer a diagram, created by a test data program, to a colleague who was compiling a report in WordPerfect (on an "industry standard" I've Been Misled). The diagram was in drawfile format and consisted of arrowed lines showing a vector displacement field. Shouldn't be a problem, drop it into Oakdraw and export it as a bitmap, I thought. However, (a) there was a bug in the Oakdraw code that wouldn't do this correctly and (b) the bitmap would look 'blocky'.

The bug was solved by a quick call to Oak who revealed that my version was out of date and they would upgrade it if I sent them back the disk – brilliant! The trouble was that the report was due in that afternoon and, even so, it would still look blocky. However, the ever helpful Damian, (the author of Oakdraw) was able to point me in the right direction to get me out of my fix, revealing that the clipboard file was in two formats, one of which was a metafile. Exporting this to W*#@#Perfect gave us a diagram $\frac{1}{2}'' \times \frac{3}{4}''$. This was then scaled by the WordimPerfect editor but only to a maximum of A6 which, when printed, looked like my two-year-old had drawn it with a blunt wax crayon. Undaunted, I re-imported the original metafile to Corel where it had suddenly acquired much more structure. Corel had added its own line types to the original and now each arrow looked like a cubist masterpiece done in black marker pen, but at least the diagram was the right size. (A4 – I think this

implies that the export of the metafile was OK and it was the Wp import that was buggy.)

Altering the line types got us back to something resembling the original but now the arrowheads were aligned with the horizontal and vertical axes instead of in the direction of the line.

So... right back to the original data, re-draw using the default thickness and correct sense (direction) for the lines but leave off the arrowheads.

Export to Oakdraw, thence to Corel, re-edit to have arrowheads and sensible line thicknesses, thence to a CGM file, into Freelance to add the company logo and some notes. Then finally into the *industry standard package*. (N.B. heavy irony needed here.)

All-in-all this was several hours worth of messing about. I know some of your readers would have been able to do it in five minutes but it is worth considering that, had I been writing the final report in **any** of the Acorn packages, it would have taken me just seconds. And for those of you out there who would say, "Well, you'd have been better off to write the original analysis program on the IBM", I would only answer, "Have you ever tried to write a program giving vector output on a PC?" I haven't got that much time or patience. (*Out of respect for Paul's beliefs, I won't say what I think PC stands for.*)

John Molyneux, Runcorn. ♦

Footnotes (DTP column 8.5 p36) – I use Aldus PageMaker under MS Windows on PC in my day job, so I looked for footnotes when I read the enquiry. No, there isn't a footnotes facility. It could possibly be fudged by using running footers, or by using index marks and placing the resulting index at the foot of the pages. I do not know, but expect Ventura (now owned by Corel) might handle footnotes because it has a reputation as a technical/longer document package. Quark XPress is often cited as more of a page layout or magazine package than even PageMaker, so it seems unlikely that it

would handle footnotes, but again I have no experience with it.

Anthony Hilton, Leeds ♦

Internet access – In the Archive office we are getting an increasing number of enquiries regarding access to the Internet. Adrian Bool is writing a series of in-depth articles, beginning on page 13. What I want to give here is a brief overview based on the questions that I have been asked, and is not intended to be complete (I'm sure Adrian will correct any errors). It should, however, help with some of the more immediate practical questions rather than the technical areas.

Bearing in mind the excessive hype that has been built up around the system recently, a large number of people want access because it is 'the thing to do'. Unfortunately, the rapid expansion has taken its toll. I recently saw a comment that, in a quick poll of colleagues, one user found that 77% were intending to cancel their subscriptions to one of the major service providers because the only time they were able to get onto the system was very early in the morning. While the service holders are trying to improve the service they offer, it does seem that, currently, the user base is expanding more quickly than the improvements.

Another problem is that the Internet was designed by, and for, the computer literate. Whilst recent additions like the World Wide Web try to get away from this, in most cases you do need to have some background knowledge to get anywhere.

The first question to ask yourself when considering getting onto the Internet is 'why?'. If the answer stutters after 'E-mail',

you probably don't need access. A number of bulletin boards will give you access to Internet E-mail, for a nominal fee, and some also download certain newsgroups, so these are probably your best introduction. If then you decide you want full

A number of bulletin boards will give you access to Internet E-mail, for a nominal fee.

access, you can go to one of the service providers at a later date.

To connect either to the Internet via a provider, or to a bulletin board, you will need a modem. As always, faster is better (and more expensive) but bear in mind that on all RISC OS 3 machines (except the Risc PC), you are limited to 9600 baud by the hardware, so a 28800 modem probably won't give much of an advantage over a 14400 modem, unless you are planning on upgrading to a Risc PC.

To use a bulletin board, all you then need is a piece of terminal software. All the intelligence is at the bulletin board end of the link; you just pick the right options from the menu. Internet connections, however, are generally more complicated. Some service providers just offer a phone line connected to one of their own machines – many universities offer such a facility to staff and students. These work like a bulletin board in that you type commands on your computer, but they are executed on the remote machine.

This is particularly obvious if you try to download a file over the Internet. You will find that the file is on the remote machine not on your local computer, so once the Internet download is complete, you will need to do a second download from the remote machine to your own computer.

The large service providers offer a more complete solution. While you are connected to their system,

your computer is part of the Internet (indeed, if the system is configured correctly, people can download files to and from your computer). This requires more (and more complex) software than a terminal package, but there are advantages. When you connect, any E-mail or newsgroups that you have subscribed to can be downloaded in the background while you get on with something else. Once you have completed your activities, and all the mail and news has been downloaded, the connection can be broken and you can read, send and reply to mail in your own time. You can then make a second connection, and messages you have written can be uploaded to the service provider and posted appropriately.

The software to achieve this is split into sections. The most basic simply calls the number of your service provider to make the connection, then TCP/IP manages the link itself. Whereas a terminal package works on sending and receiving individual bytes, TCP/IP deals with larger blocks, and each block can be individually addressed so that parts of two separate files, being sent together, are not put in the wrong places. TCP/IP also has built-in support for some of the general Internet commands such as Telnet (which allows you to log onto remote computers, providing you have access) and FTP (for transferring files) facilities.

More complex tasks are handled by other applications. For example, reading news articles will

Connection Type	Bulletin Board or Remote Login	Internet Service Provider
Example Connection	Arcade or Archiboard Central local university	Demon Internet
Internet Services	Mail, possibly limited news access via bulletin board conferences	Full internet access including mail, news, file transfers, World Wide Web
Other Services	Local Mail, Fidonet mail local filedownloads	none
Hardware needed	Modem	Modem
Example hardware	Worldport 14400	Worldport 14400
Software Needed	Terminal Software	TCPIP software
Commercial software	Hearsay II, Arcterm 7	
Share/Freeeware	ZAnsi	Internet Starter Kit

usually involve the application you 'see' (such as TTFN) which relies on another application (NewsBase) to retrieve the news from the remote site and convert it to a usable form. NewsBase in turn relies on TCP/IP to handle the low level transfer of the data between the two machines. World Wide Web browsers work in a similar way, with one application displaying the pages, one transferring the files (via TCP/IP) to your machine, and others for particular tasks, such as converting foreign image formats to display.

All this can take some setting up, although fortunately there is a package downloadable from many bulletin boards (just over 800Kb at the last count) which has as much as possible preconfigured. This is the Internet Starter Kit and is the best place to start once you have your connection to Demon Internet. Currently, there aren't any commercial packages for Internet connection, but Acorn's package was announced at BETT and is planned for release during the summer – so, hopefully, by Acorn World?!

The Internet version of Doggysoft's Termite package (announced at Acorn World last year) is also not yet available. For the time being, you are very much on your own. Unfortunately, most of the support for the Internet Starter Kit seems to be via the Internet!

This should have given an overview of what is involved; if you have specific questions please write in with them and we will try to include them in a future issue of Archive.

Matthew Hunter, NCS ♦

Modes summary – In Archive (8.6 p30) is a table of Archimedes modes provided by Steve Hutchinson. It seems to me that either there are some errors in the table, or else the same number can be allocated to different modes according to the programs in use. Either of these possibilities causes confusion. I have looked at mode characteristics with the program FlipTop (as used by Steve) but with a ColourCard installed; this provides a large number of new modes. With this setup, mode 98 is a 16 colour 640x512 mode differing from the native mode 20 only in its higher refresh rate of 65Hz.

Mode 99 in the 256 colour equivalent, and gives no problem on my monitor, also a Taxan 770+. The ColourCard does offer some 800x600 modes (100 to 103) but these do not work on the Taxan, as predicted in the ColourCard manual. Steve has mode 102 as something quite different and not available on my system, though there is a mode 110 with 16 colours at 1152x424 and a refresh rate of 71Hz. It is very clear and stable, but rather hard to read on a 14" monitor because the characters are so small.

Philip Draper, Herts. ♦

A quick glance through the PRMs reveals the screen mode allocations from Acorn. Modes 0-63 are reserved for use by RISC OS, and should not change. Modes 64-95 are reserved for use by 3rd party applications. Since they are allocated by Acorn they should also be 'constant' in that a machine which supports a mode in that range should have the same definition of the mode as any other machine, although not all machines would support the mode. The final group, between 96 and 127, are 'reserved for use by user' and therefore could be defined differently for any machine.

Steve Hutchinson was using the NewModes module supplied with several of CC's packages (including Impression), which defines modes in the 3rd party area – no modes are defined above 96. The higher modes were defined by the VIDC enhancer software which allows you to create your own modes. The ColourCard provides a large number of modes. This is partly because it has copies of the standard modes that take advantage of the ColourCard hardware, while leaving the standard modes untouched for compatibility. This is why it defines the higher modes. In general, the only modes you should rely on being present are those in the range 0-63.

Matthew Hunter, NCS ♦

New element discovered? – Atomic number: 586 PENTIUM P5 – derivation: Pent up.

Pentium is a relatively new gold-coloured semi-conducting element discovered in 1993 by Intel inside a box with other obsolete semiconductors. The thermal capture cross section of pentium is very high and, if left to itself, it becomes extremely hot due to thermal decay, and needs extensive cooling if

it is not to burn out to become pentium pentoxide, VO₅, within an hour. It occurs as flat, square gold-coloured platelets of chips with striations and other black markings on the upper surface, and with grey-coloured stalactite-like formations on the underside, probably due to excessive overheating. Pentium has a very low melting point.

Pentium has an electronic configuration of 3,000,000 but, despite having an electron spin resonance of 90MHz, it behaves as though it were oscillating at more like 1MHz. Pentium exhibits an extremely high refractive index because its electrons travel so very slowly; indeed, 95 percent of them are stationary at any one time.

Pentium has a high magnetic susceptibility, making it very vulnerable to electromagnetism interference. Processing of Pentium involves floating it on a very imprecise point, only four decimal places long (on which only three Angels and Maxwell's Demon can dance).

Pentium is soluble in air and water and crystallizes in the Penrose pentagonal symmetry pseudo-crystalline system.

Pentium is highly radioactive with a very short shelf life and is not expected to last more than three years before decaying into a newer, more highly reactive semiconducting element with an even shorter shelf life, called sexium, S6. It has found little use and it is unlikely that any practical use will ever be found for it, because, although elementary, it is a few marbles short of an atom. It has a very high density and all its electrons are degenerate. Through the Es/Or interchange interaction, the mesons in the nucleus of pentium have transmuted into morons.

Pentium is frequently found in use as an inferior replacement for glass in Windows, but is quite unsuitable even for this purpose because, in operation, it is totally opaque.

Pentium is unstable and every precaution must be taken in handling the substance. It is liable to spontaneously divide, (with the emission of spurious wons, nons and other extraneous digitons) and when it does, the result is always unpredictable. Handling it is a calculated risk.

Claim to fame: Pentium obeys Heisenberg's uncertainty principle and all known laws of quantum improbability theory to the highest precision known and can be employed for use in electronic random number generators with the utmost confidence.

Roger Darlington, Manchester ♦

PC Compatibility – I read many times of the old chestnut "is it PC compatible" referring to Acorn machines. But what is meant by compatible? If you **MUST** run WordPerfect, buy a PC, but surely real compatibility means sharing data without loss or extra effort in conversion. By this definition, the PC I run at work is not compatible with itself! Or rather, the various software packages I run are not compatible and cannot easily share data because of the variety of file formats and even flavours of one "standard".

I would, therefore, prefer compatibility to be concentrated on by software houses. Make Archimedes word processors able to read and write files that MS Word, WordPerfect, etc have generated and can read back. Similarly, spreadsheets need to understand MS Excel and Lotus 1-2-3 formats and databases need dBase, FoxPro, Access or whatever capability. DTP software needs to do it all – read various word processor, spreadsheet and even database files, and various graphic formats including EPS. When this level of compatibility arrives, we can stop ranting about 486 cards for Risc PC and ask for RISC OS 4 to make good use of multiple processors (two ARM 600s or 700s etc) – that should make Acorn machines real killers to PowerPC, Pentium, or whatever else people put into desktop machines.

Anthony Hilton, Leeds ♦

Polish Font (Help!!!! 8.6 p24) – I was able to telephone Charlie Alford to tell him that Electronic Font Foundry sell fonts in a number of alphabets suitable for a wide variety of languages including Latin 2 which covers Polish.

Anthony Hilton, Leeds ♦

PostScript interpreter – Someone asked recently whether there was a PostScript interpreter for RISC OS. I think that the Freeware GhostScript might fit the bill. The RISC OS implementation (by David Elworthy – I obtained my copy from The Datafile) will display a PostScript file on screen and allow the result to be saved as a sprite. There is also source code, needing to be compiled, to generate printer device drivers for non-PostScript printers.

Anthony Hilton, Leeds ♦

Protext 6 cancelled – The long awaited RISC OS version of the multi-platform word processor Protext 6 has been cancelled. Arnor say that they have now stopped work on the Acorn version which was originally scheduled for release early last year, after the PC and Atari versions, and then postponed until the autumn. Protext 5, which was issued for the Archimedes in 1990 but does not multitask, was also promised in a new RISC OS compliant version and this had reached the testing stage in 1992 before being abandoned in favour of work on Protext 6. Arnor's decision not to complete the Acorn Protext 6 could have been influenced by the knowledge that the growing number of Risc PC owners would be able to use the PC version on their machines. It remains to be seen if other software producers now selling in the Acorn market will think the same way.

Peter Jennings, St Albans ♦

Pulp Fiction? – If I had to write a column, it would be the 'gobble-de-gook' column, and would contain all the very worst computer jargon you could find. It would fearlessly lay bare all those technical works of fiction which masquerade as help manuals.

Gobble-de-gook comes about because of the complex structure of most programmers' brains. They are unable to make anything simple – and why should they? If you had to spend all day and night writing complex arrays and playing with your binary digits, you'd feel you had a right to make everyone else suffer. Of course, as competent programmers, they can't make their software difficult to use, otherwise no one would buy it, so they do the next

best thing and complicate people's lives by writing 'User Manuals'.

Now there's a euphemism if ever there was one – for user manual, read 'User Muddle'. The idea of these so called user manuals is not to get you quickly into the program you've just rushed home with; the idea is to turn your brain into jelly and render you comatose to all reasonable thought.

Take SCSI's, for example. Recently I fitted a new removable drive to my computer. In order to do it correctly, I thought I'd better read through a few 'Simple-Introduction-to-SCSI' type books. It was the second daftest thing I've ever done. (*What was the first, Gabriel? Ed.*)

Page 1, paragraph 2, started with 'a simple description of what a SCSI system is' (paragraph 1 had already told me that SCSI stands for *Small Computer Systems Interface* – that was very enlightening, thank you.) Anyway, the definition goes like this:

'A SCSI system is made up of one or more initiator devices, and one or more target devices. The number of initiators and targets does not matter, but there cannot be more than eight devices altogether. Most Acorn computers have the controller card in the computer as the only initiator and one or more target devices...'

Following so far?

'Most external devices have two SCSI cable connectors which makes everything much simpler. These connectors are usually the Centronics (or Amphenol) type (but sometimes they are IDC)'. And this makes things much simpler?

There's lots more of this. There's a discourse on termination; an interesting little critique on Magneto-opticals; and a very useful discussion on the differences between Drives, Devices and ID's – none of which made much sense. Anyway, assuming you actually manage to set the right switches and get the thing into the SCSI chain (more jargon) you then come to the next most important thing... configuring the SCSI system.

You have to configure the system because, apparently, the poor old computer doesn't yet realise you've just disrupted its equilibrium by inserting a foreign body into its otherwise peaceful existence – and it won't like it! Nowadays, most suppliers provide software which will do the configuring for you – these do, of course, have their own little idiosyncrasies but, on the whole, they do at least work. If you don't have this software, you have to configure the system on your own. But don't worry, all you have to do is follow the instructions!

1. Press F12 and go to the Command Line. It is assumed that you know what the command line is, and what it's used for – if you're not sure, take a couple of days off work and wade through the Acorn 'User Manuals'.

2. Type st. [RETURN] – st. is shorthand for Status. This displays a list of more gobble-de-gook. It serves no useful purpose to the likes of you and me – but it looks intimidating, so serves the programmer's purpose very well.

3. Find SCSIFMap and re-configure it to the new setting, for example, *config. SCSIFMap 4=n 5=n,s Hx=n [RETURN]

It explains this procedure thus; **...n is the device number, s is an optional switch that allows SCSIFS to cope with very slow devices (like me?), 4 and 5 are the SCSIFS drive numbers and Hx is the host or interface number (0-3)...**

4. Re-boot your computer. Re-boot? This suggests that, at some point, I must have 'booted it' – I guess I must have missed that. Back to the Acorn manual – **re-boot = hold down the Ctrl key and press the Break key.**

Having dutifully obeyed, the machine 're-boots' with a beep and a burp, and hey presto... a new icon on the bar. Actually, in my case, there were *two* new icons. I clicked on one and was burped at with a 'you've done something wrong' message. I tried the other icon, more burps. This time it accused me of not initialising the drive. Back to the manual. It was time to wade through the joys of initialisation, formatting, sectioning and partitioning. More gobble-de-gook.

I did eventually get the thing going, though I still have two icons, one of which doesn't do anything except burp at me when I accidentally click on it. Still, at least I'm back to work again and next time, I'll know what to do, won't I?

In the meantime, just so you know, here are a few terms which all refer to the same thing, namely, the SCSI card. It can be called, the Host, the SCSI Expansion, the SCSI Interface, the SCSI card, the SCSI podule. It can also be known as 'that thing you bung in the back'.

Finally, there was one really helpful thing I found in a book; it said:

'The terms format, initialise, section and partition can have different meanings depending on the literature you read... Literature supplied with new drives probably refers to PCs or Macs and may be misleading.'

Need I say more?

Gabriel Swords, Norwich ♦

RISC chips discontinued! – (Not a problem which Apple are likely to have for a little while yet!) VLSI have said that, after 8 years, they are discontinuing production of ARM2, MEMC1a, VIDC and IOC. This could cause a problem for some of the 7/8 year-old RISC-based Archimedes desktop computers, many of which are still in regular everyday use. (How many 7/8 year old Macs and PCs are still in use? says he, rubbing it in!) If anyone has any secondhand chips they don't want, please send them in and we'll pass them on to our repair specialists so that they can keep the old A310s and A440s going strong. Thanks.

Ed. ♦

Sleuth 2 – In Peter Jennings' review of Sleuth 2 (Archive 8.7 p29), there was mention of my pleasure at getting such respectable results from processing faxes. Considering they had been sent in standard resolution (100 dpi?) and that the user-guide recommends a minimum of 300 dpi, this really was impressive. Around the same time, Acorn User also published a review which reported poor results from faxes. So why the discrepancy?

I've been looking into this in some detail and believe the probable cause is the scan quality and, possibly, the font(s) used (sans-serif fonts seem to give better accuracy). Once again, the user-guide does cover the need to optimise scan quality, and this has been mentioned in an earlier Archive.

In my experience, especially if you are going to process multiple pages, it is very well worthwhile doing two or three test scans with different brightness/contrast settings to see which gives the most accurate results. A little extra effort at this stage can pay large dividends and you will soon get a 'feel' for what settings will consistently give good results for different originals. Anyone with a Scanlight Professional scanner, without the

brightness control, may wish to consider getting David Pilling's Twain driver (£19 from NCS) as this provides an effective control in software.

Jim Nottingham, York ♦

Turbo Drivers (not a) problem –

The problem of Printers 1.28 with the current versions of the Turbo Drivers has, apparently, now been fixed, so **please do not** remove line 91 (as we stated in Archive 8.7 p13) of the !RunImage file! If you still have a problem, contact Computer Concepts.

CC Technical Support ♦

Rise PC Column

Keith Hodge

Floppy disk drives

Robert Cocks has written to say that, in a reply from Acorn, he has been informed that the new Mk2 issue PCB (due into production now), will allow a second 3½" floppy drive to be fitted, but not a 5¼" (due I think, to differences in the 32 core ribbon cable signal layout). This is of no use really, as dual floppy drives were only used for copying disks, and this, of course, is much faster now, using the hard disk as intermediate storage. So, for those who need a 5¼" drive, it still has to be H.E.C. ActLead.

As a result of further investigation, I have found that there are holes provided in the bottom of the slices, which enable screws to be fitted through into the underside of floppy, hard, and CD-ROM drives, to retain them in place, and so the securing clips which were provided with the machines are no longer required. Please note: If you are fitting a drive using your own screws, it is essential to use screws which are of the correct length, as it is possible with overly long screws, to damage some makes of drives.

Software information

Rob Cowell (Design IT) has written after my comments last month, to say that all owners of Design IT and Computer Concepts' Teletext cards

can receive the latest version of the support software (v1.88, 16th February 1995) f.o.c., *provided* that, when they return their disk in a jiffy bag, they supply a *stamped and addressed* return label. This requirement applies to all software returned for upgrading where the upgrade is provided f.o.c.

As anyone who has read this column for any length of time will know, I run a small electronic maintenance business as well as having a full time position with a large plc. As I only have a limited amount of time left after these two jobs, I find the 24th of April to be the worst date of the year. Why? I hear you ask. Because, on this date I have to do my income tax return and, without question, this operation cost me the front inch of my hair and two weeks of almost non-stop panic in 1992, my first year of trading (and it was only that little with considerable help from the tax man!).

This year however, I have already done a trial tax return and it was done in not more than two hours. How is this possible? Because, not long after that tax return, I meet Quentin from Apricote Studios at the London Acorn Show and, with his usual flamboyant style, he had soon persuaded me that 'Prophet' would cure all my headaches. Never has a program saved me so much time and so actively forced me into being tidy in my accounts – the bank balances

will not tie up until you have everything entered correctly!

So what has this to do with the Risc PC, I hear you ask? Well, Prophet worked well on my old Archimedes, but on the new machine the performance is transformed. At the time I was doing my accounts, David Pilling's ArcFax was sending a large number of spare part order faxes in the background, Rob Cowan's TeleText Software was downloading the share prices and spooling them to disk, and Comlink was downloading under script control approximately 230Kb of files from my local packet radio bulletin board and yet at no time did the computer become sluggish. This level of power allows real improvements in productivity.

Hardware and software news

I am hoping that by the time you read the next issue of this column, I will have been able to use my current copy of the RS CD ROM catalogue on the PC card, as Paul has been asked by Acorn how many units he requires. This is good news, as at the moment I am using it on a 486, which is breaking my heart. I think that Acorn need to ensure that they get the first releases out to the people who put cash up front when they bought their machine. Certainly Apple (sorry Paul!) have released their own hardware emulator (and, yes, I know it takes buckets of RAM etc) to the public.

Some of the timings I have seen for the Apple emulator seem very suspect and lead me to believe that the bios has been coded to flatter the test software results. What we need now to redress the balance (I hope!), are some timings for operation of a number of software packages, i.e. wordprocessor, spreadsheet, etc so as to show the speed / cost advantages of the Risc PC emulator approach.

Other news from ESP (Expressive Software Projects) is that the Acorn Sound Card is the same as their 16bit Minnie Audio Card (which has now been brought down in price to match the Acorn Card). More interestingly, if you have Cumana's Audio plug-in-kit to bring audio from an internal Risc PC CD-ROM drive, you will find that the Acorn/ESP audio card wants the same socket! Thankfully, Cumana and ESP have got together and produced a piggyback board to solve this

problem. The side benefit of this is that you will be able to have full 16-bit stereo from audio CD as well via the headphone socket on the back of the machine. ESP said the cost of the piggyback board should only be a few quid!?! (Thanks to Chris Hughes of Wakefield for this information.)

Questions of the month

(1) From Martyn Purdie – 'I have been adding extras to my ACB45 (built up from a base model) and have noted that the two slices are different, in that one does not seem to have the anti-radiation coating (brown in colour), which is sprayed on the inside of the other. Have any other readers had a look inside there machine and, if so, what have they discovered on this matter?'

I myself, will be very interested to see readers replies on this subject, as one of the reasons for choosing a Risc PC was the promise of low radio frequency interference which is so useful to Radio Amateurs. Mine certainly is very much quieter than the Archimedes, but I have not had a chance to look inside mine since Martyn's letter, to find out whether it has the coating on all its plastic.

Request of the month

(1) From Australia! To be precise, from Simon Pockley, the secretary of the 'Victorian BBC Users' Group Inc', who are an Acorn user group at 60 Bridge Street, Northcote, Victoria, Australia, 3070. They are hoping that a mention in this column will attract the attention of software houses etc, who will hopefully send demonstration disks to help increase Risc PC awareness in the southern hemisphere.

Tailpiece

Don't all ring at once! But if anybody would like my July-October 1994 RS CD-ROM catalogue disk, just give me a ring to see if I still have it, and it's yours for free. It seems a shame to throw out all these useful, but out-of-date information sources. The prices may be a little out of date, but the content is still very useful. Will we start to see libraries for this sort of material starting to appear?

As usual, I can be contacted by letter at the HES address on the back page, by telephone after 7p.m., or by Packet Radio from anywhere in the world, as GW4NEI@GB70AR.#16.GBR.EU. ♦

Mark Howe

Apologies to those who searched in vain for this column in last month's magazine. I have now answered all the letters I can find, and will maybe find some more when I move offices in the next couple of months.

Life seems good at the moment: summer has arrived in Provence, and I have just produced a 6Mb two-page newsletter without experiencing a single error from Publisher. Is this because I did not import any text from earlier documents, or does the fact that I am now using a 16Mb machine have anything to do with it?

Imagesetting Part 3: The printer driver

Last time, we dealt with item two on the CC imagesetting checklist. Fortunately, the next few items are rather simpler than master pages and overprinting.

Check the document!

If you produce artwork on a desktop printer and then find an error, you can redo it quickly and cheaply. Bromides and films are two orders of magnitude more expensive, and the turnaround is usually measured in hours or days rather than minutes. I mentioned the uses and limitations of spell-checkers in my last article.

Check that frames are still in the right order, i.e. that all the text, borders and illustrations are still visible and that edits to text in one place, have not changed the format in another. I still find Publisher screen redraw slightly suspect when it comes to irregular frames and thin borders, but pressing <f12> followed by <return> forces a complete redraw.

Incidentally, a tiling option in Publisher would help with the proof-reading of large documents. I am currently working on a centre spread for a newsletter which I have to reduce to 62% to output on my laser printer. Since some of the text is in 9pt and is overlaid on a photo, it is difficult to check the punctuation!

Missing fonts

The 'compile font usage list' option in Publisher was intended to provide an easy way to check that all the necessary fonts are loaded. CC insist that this utility has been extensively tested to ensure that the lists are accurate, but I have several documents, some of them quite trivial, where the list produced includes fonts which are demonstrably not used. Has anyone else found this to be the case, or am I losing my marbles?

In practice, Publisher complains vociferously if a document including unseen fonts is loaded. Artworks files embedded in Publisher documents do not, however, produce any error, and twice now I have produced files with chunks of text missing. I now routinely vectorise text in Artworks which, in any case, saves memory if a few letters of an exotic font are involved.

Colour table

Publisher gives the option to fine-tune the colour output for a particular printer. CC recommend the 'Imagesetter, normal' setting. I would be interested in hearing from anyone who has actually printed the same job using different colour tables to see what difference they make!

Acorn printer drivers

CC say that many of the problems with PostScript output that have been attributed to Publisher are actually due to Acorn's printer driver. I am usually pretty sceptical of this kind of explanation but, in this case, they do seem to have a point.

Problem number 1: Pages which are larger than A4 used to generate errors or were cropped. One reader contacted Acorn about this and was informed that the Linotronic 300 imagesetter was not supported (this is rather like not supporting an Epson FX80 or a LaserJet II). The solution, as I mentioned in an earlier article, is to produce a dummy page size which is too small for the document you wish to print. Publisher will then offer to produce a new page size to measure. As well as producing working PostScript, this also means

that the minimum amount of film will be used, which is one sure way to make friends at the imagesetting bureau.

Problem number 2: Some versions of the printer driver have trouble dealing with some fonts, notably with accented characters in EFF fonts. This problem seems to have been dealt with in the v1.22 drivers.

Problem number 3: Acorn printer drivers do not support background printing. CC have no plans to produce a PostScript Turbo Driver at present, arguing that Acorn should do this.

Problem number 4: There is currently no level 2 PostScript driver available. Postscript level 2 is used by most imagesetters and an increasing number of desktop PostScript printers. Its main advantage is the use of compression algorithms which drastically reduce the size of files containing scanned images. Shorter files mean less memory (and therefore less errors on small imagesetters), as well as faster downloading (and therefore smaller bills).

The Acorn world appears to be in a catch-22 situation regarding printer drivers. Existing PostScript drivers are slow and flaky, so most of us use Turbo Drivers or direct drive lasers, which means that there is little incentive for anyone to produce fast, reliable PostScript drivers. When false 600 dpi was better than most PCs and Macs could offer, this didn't matter too much, but 1200 dpi laser printers are catching on fast, and most of them run PostScript. It is ironic that a Risc PC using the Calligraph PostScript RIP (Archive 8.7 p2) should be able to imageset level 2 files that the Risc PC cannot produce itself!

To return to the present, the v1.22 printer driver appears to work, subject to the comments above. I use the generic PostScript definition file, although others seem to use the Linotronic 200 file.

Set output to file by calling up the 'printer control' dialogue box and choosing 'connection' over the PostScript printer. I recommend writing to an Archimedes format hard disk initially, even if you plan to put the file onto a floppy or a SyQuest afterwards. Make sure that the PostScript printer is active. Set up and select a dummy page size. Save the settings.

The next stage is to produce the PostScript, but this will have to wait until next month!

Acorn's standards

Regarding potential problems with Style's use of !CCShared (Archive 8.7 p40), Publisher also uses this directory, presumably to avoid duplicating CC modules which are used by several applications. Unfortunately, the location of Publisher appears to be hard-wired somewhere in this directory, with the result that moving the application, upgrading your hard disk etc, generates the dreaded "This version of Impression is corrupt" error. The message is misleading: 'Something Impression has previously left elsewhere in the system is corrupt' would be more accurate.

I discovered all this when moving from an A5000 to an A540. I copied all my software across to the A540 using Access, and guess which application would not work? I tried running !SysMerge, but presumably this utility does not know about !CCShared. I would have re-installed from the original disks, but I am using a beta-test version which was supplied on one high density disk (which I could not read using the A540). The solution was to reinstall an older version of Publisher to log the correct pathname in !CCShared, delete it and then replace it with the newer application from the other machine.

I would not mind so much if !CCshared actually saved space. The release notes with the version 4 Turbo Driver explain that, after running the !Install program, it was necessary to copy files out of !CCShared into up to three other applications.

I can imagine that CC find this kind of criticism rather irritating, especially as !CCShared was no doubt intended partly to answer complaints about needless duplication of modules. The best way forward would surely be for Acorn to define a standard way of sharing resources which !SysMerge and other programs could handle sensibly.

I promised that this time I would not use the 'D' word, but I cannot resist mentioning the 'Hardware key not found' messages which have regularly interrupted my work since reconfiguring my two systems. The official fix is to wash the transparent and convenient black boxes in methylated spirit to

remove any dirt. I do not understand why the contacts are fine when I am using the printer port for more mundane tasks, such as printing, and, if it turns out that dust is lodged in the computer socket, I fear that dropping the computer in solvent will wash the Acorn logo off the case.

Next month

Day job permitting, I plan to review EFF Publisher Fonts and delve into the mysteries of PostScript. You can contact me at 2 montée des Carrelets, 84360 Lauris, France. Fax 00-33-9008-4139. ♦

GameOn!

Dave Floyd

GameOn! is a utility from The ARM Club which allows some of the Archimedes games that will not run on a Risc PC to work on the new machine. The software costs £10 from The ARM Club.

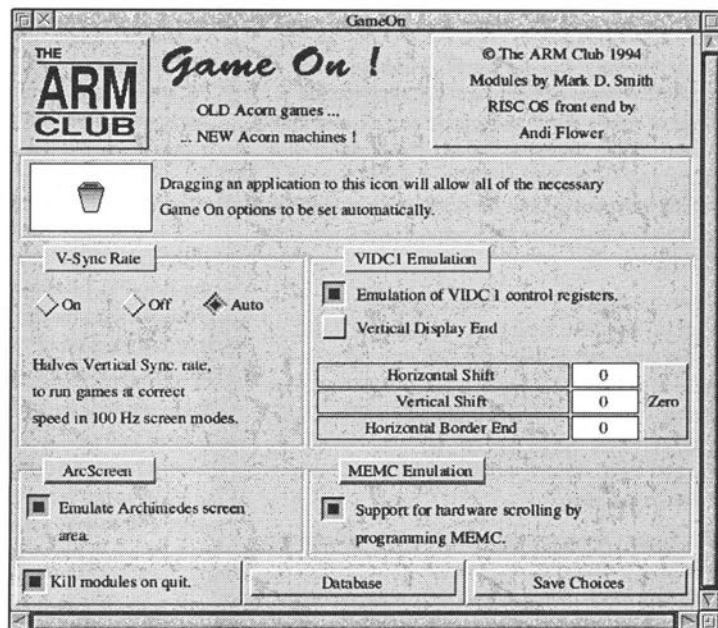
Background

Many years ago, following the release of the BBC Master, I remember there being many complaints from owners of the new machine that many of their BBC games would no longer work. In Micro User, Mike Cook responded to this by imparting the sage advice that when buying a new machine, owners should be pleasantly surprised when old software works, rather than expect it as of right. This piece of advice seemed so sensible that I have remembered it to this day, and therefore when upgrading to a Risc PC late last year had prepared myself for the worst, at least as far as my games collection was concerned. I was, therefore, pleasantly surprised to find that most of my favourite and regularly played games worked fine. There were exceptions to this, however, and once I started to investigate those depths of my collection which I played more infrequently, the drop out rate increased. To the rescue come The ARM Club, with a utility that attempts to smooth over the

incompatibilities between new and old by simulating those parts of the Archimedes range such as the VIDC and MEMC 1 chips, the lack of which, provides much of the problem when trying to run games on the Risc PC.

The software

GameOn! installs onto the icon bar and provides a control window via which you can alter the options available to you. Each option is covered in the small manual provided. Also provided is a database of games and their compatibility with the Risc PC, with or without GameOn!. This is very useful and, although not exhaustive, contains a good selection of the games which a Risc PC owner could be



reasonably expected to want to play. Where I have been able to check the claims in the database, I have found the information to be correct, and have included a slightly expanded version of the list along with this review for inclusion on the monthly disk, should there be space.

Conclusion

The most frustrating thing about GameOn! is that there is very little to say about it, from a reviewer's point of view. It takes up 128Kb of memory, does everything that is claimed for it almost seamlessly

and that is pretty much all that can realistically be expected from any piece of software. If you own a Risc PC and have a number of games that will no longer work, but which become usable with GameOn! then, at £10 it has to be rated as a bargain. It will not work on everything, but given the amount of unofficial routines used by games programmers and software protection methods, I do not feel that it could reasonably be expected to do so. All in all, this is an excellent piece of software that should be considered by every Risc PC games player. ♦

HP LaserJet 4P (+ Risc PC)

Charles Woodbridge

On my study desk, I have a Risc PC 600 with integral CD-ROM drive and a 600dpi Hewlett Packard LaserJet 4P. Having used this system for a few months, I thought other readers might like to hear my impression of the quality of the printer as an alternative to the Laser Direct system. *(This is especially relevant as CC seem unable to supply either LBP4 or LBP8 at the moment and the future of these particular laser printers seems uncertain. Ed.)*

As an Advisory Teacher for IT, I used to have access to a range of hardware including the full range of Acorn RISC computers and a Laser Direct system. When I became Deputy Headteacher of a Infant and Junior School I knew I would have to purchase a good system for home use because I had an A5000 with a basic laser printer which was on its last legs.

When the Risc PC was released I decided to upgrade but there is no point in having a Rolls Royce computer if the paper output is poor, so I decided to look for a higher quality black and white printer – true 600dpi and preferably under £800 – a difficult task! Speed was not essential but quality was and I also wanted a printer which was fairly cheap to maintain.

The Laser Direct system was tempting but did not offer true 600dpi and still cost around £880 including VAT. The Canons have a good engine

and offer good economy on consumables. They are very fast – but that wasn't one of my criteria.

I looked at other printers and came upon the HP LaserJet 4 series but these were very expensive. They did offer true 600dpi though and were also good engines, offering good economy on consumables. A new toner/drum cartridge costs £66.50 and does around 3000 pages (2.2p/page).

I then came across the HP LaserJet 4P, a non-PostScript printer offering 4 pages per minute with 2Mb RAM and 600dpi. I drove to the local large PC store to see the machine in operation. The demo pages were excellent, just as good quality as its bigger brothers (4, 4M and 4Si). I looked through the various computer magazines for companies offering the 4P. I found a company selling it at £703 inclusive of VAT. They had them in stock too, so I bought one! Two days later it was on the desk with the Risc PC. I had been told by CC that the TurboDrivers for the Risc PC were needing a major upgrade because of the new 32-bit bus; they would perhaps be available in July!

So I set up the Acorn driver. It was good. The printed text quality was excellent – better than the Laser Direct. The graphics were also good but not as good as the demo pages seen at the PC store. After a few trials, I managed to get the graphics to be a lot better but still not as 'stunning' as those I saw in the shop. The TurboDriver would be better I decided and waited for their release.

Much of the time our work is printed at 300dpi – which is very fast even with the Acorn driver – and even at this resolution, the quality is excellent with really strong blacks and smooth curves to the text at all print sizes.

The TurboDrivers were completed by late September and I bought one straight away. When it arrived I decided that I was so content with the Acorn driver that the Turbo Driver would have to be *particularly good* otherwise I would send it back and get our £57.58 returned. I backed up the !System and the !Printers just in case.

The TurboDriver is very good – but I did not think this at first. The manual which was in the box was written in May 93 – before the Risc PC drivers were completed. There were five(!) paper supplements. As an Advisory Teacher, I had learnt the importance of reading manuals and so I read through the documentation. Installing was easy. The initial prints were fast but the graphics seemed no better than the Acorn Drivers. I re-read the manuals and tried again – better. I tried printing two copies of a document but 4 copies were printed – oops!

I rang CC and had a long conversation about the drivers. The technical support was good (especially once I had established that I was past ‘beginner level’) and a clear description of how to control the quality of graphics on the driver was given. The doubling document print problem; “That is a known bug, sir. In fact, the TurboDriver is squaring the number to be printed (e.g. 3=9pages, 4=16 pages)”. With practice, I have found that the amount of control offered by the TurboDriver is excellent balancing dot patterns, lines per inch and resolution to achieve the best results.

The printer uses data compression techniques which effectively enlarges the value of the 2Mb of RAM

and I have only once had the printer run out of memory and that was by printing an unusually large and complex graphic – the printer printed the page at 300dpi instead.

At last I have my desired system (*except I need more VRAM... ..a scanner would be useful... ..the hard drive could do with being bigger... !*). A Risc PC 600 and a good quality, reliable and economical printer (approximately 2p per page excluding paper). The printing is fast despite a relatively slow engine (4 pages per minute) and I have included a table of results to show the speed increases I have experienced.

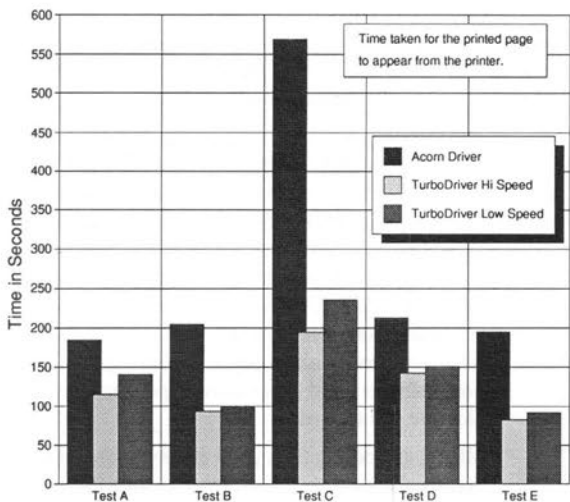
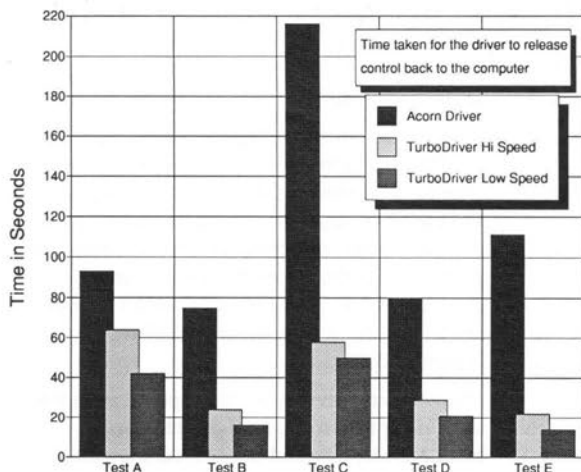
I have a friend who has recently opened a sandwich shop in our local town. I designed his logo, produced his menu and business card originals which were then been printed at our local print shop. Everyone has been very impressed with the quality of the artwork. Despite people in ‘industry’ telling me that Acorns are not ‘industry standard’ – isn’t this an ‘industry standard’ job?!

For school work, I have printed on acetates with no problems at all. I usually print from the paper tray (which holds over 100 sheets of A4 or smaller) but have occasionally used the single paper feed. This could be better and takes a little practice to ensure that your paper goes through straight. You can also feed through envelopes but I haven’t done this yet. I have also done double-sided documents and find that you need to use reasonable quality paper (80g or better) to avoid paper jams. Paper jams are easily located and cleared.

If you are looking for a good quality printer at a reasonable price to use with the Acorn RISC computers then the 4P with TurboDrivers is something worth considering, the total cost has been £761.40, plus phone calls!

File Information	Acorn Driver		Turbo Driver Hi Speed Parallel		Turbo Driver Low Speed Parallel	
	Return Control	Printed	Return Control	Printed	Return Control	Printed
A...256 Grey Sprite - no text (891Kb)	93	185	64 [1.45]	116 [1.59]	42 [2.21]	141 [1.31]
B...Text + Drawfile (12Kb)	75	205	24 [3.13]	94 [2.18]	16 [4.16]	100 [2.05]
C...Text (3 pages 1700 words)	216	569	58 [3.72]	195 [2.92]	50 [4.32]	236 [2.41]
D...Text + Drawfile + Sprite (246Kb)	80	213	29 [2.76]	103 [2.06]	21 [3.81]	151 [1.41]
E...CC Plane (Drawfile)	116	192	22 [5.27]	83 [2.31]	14 [8.29]	92 [2.09]

Test Data



All timing are in seconds.

Figures in [] are speed increases compared with the Acorn Driver.

Description of Files:

A) A large (891Kb) 256 grey sprite converted from the JPEG images (number 9, fruit on a table) supplied by Acorn with the Risc PC.

B) A single page of text (487 words) in one font only.

C) Three pages of text (1700 words) in one font style only.

D) One page of text (487 words) with a 15Kb drawfile, a 221Kb 256 grey sprite and 5 different font styles.

E) A complex drawfile (27Kb); the famous Computer Concepts aeroplane at almost A4 size.

All files printed on a Risc PC 600, 8Mb RAM + 1Mb VRAM, HCCS CD-ROM drive fitted, 14in monitor, 800×600×256 colour screen mode with only the TurboDriver and !Style or !Draw loaded.

Files A, B, C and D were printed from !Style and file E was printed from !Draw.

The CC technical support suggested turning off the high speed parallel port and retesting and so I have included those figures too.

When carrying out the tests, the computer was not being used once the print job had started so I decided to retest file B and make the computer do some other work at the same time. I used a star plotting program !StarGazer to simulate the night sky changing at ½ hourly intervals; this involved lots of calculations by the computer and regular screen redraws.

Turbo Driver low speed parallel port:

Returned Control 23 seconds (compared with 16 seconds when not multitasking)

Printed Page 141 seconds (compared with 140 seconds when not multitasking). ♦

Murphy's Law has struck: the HP Laserjet 4P is no longer available and HP have not yet released an alternative!!! The nearest we can provide is the HP Laserjet 4L which is 300 dpi (not 600) 1Mb (not 2Mb – but 300 dpi needs less memory) and it is available through Archive for £590. (Extra 1Mb memory is £95.) I have to be honest and say that you will probably get a better price than this if you shop around in the PC magazines. Ed. ♦

Personal Accounts v 3 Updates

Mick Burrell

I wrote the review of Personal Accounts v 3 which appeared in Archive 7.11 p65. Any of you who use Apricote Studios' programs will know that they are constantly being improved and that updates to the latest improved version are supplied free. (We all send an address label and return postage with our disks, don't we?) There have been many changes since the review appeared, and I am currently using version 3.52. Some of the additions have been made at the request of users, (there is always a very quick response from Apricote) some to improve the facilities offered, and others just to make life easier.

So what has been done? I understand that PA was not large enough for some users and so the number of accounts handled has been increased to 24, and the number of standing orders to 96. You can now load another file (only if you set the option) over the one in memory. This means that if you keep two or more files, you don't have to 'save your work and quit' and then load the program again with the new file. There is an obvious trap of not saving your work but, with care, quite useful.

The forecast section has been improved to make cashflow forecasting a bit easier and there has been a change to allow you to have menus opening either where the mouse pointer is or where the caret is. One of the nice features that v3 has always had is the ability to start up with all the windows open that were open when you last saved. I find this very useful as I almost always leave the same windows on screen, opening and closing others as needed. If, however, I wanted to look at (but not alter) a standing order, just loading the file, opening the standing order window and closing it again would result in another save. It has now changed so that it only invokes the auto save (assuming you have it turned on) if you have made alterations.

Not wishing to be left behind by the current 'trend', Apricote have now provided a button bar to perform

most actions; the icons being well designed and self-explanatory. I must admit to not being a fan of button bars generally, but I do find this one useful. I have spent the last few minutes looking for an explanation for this, but it escapes me! I think it may be that it is being used for opening and closing infrequently used windows, and so makes the task very quick and simple. For me, many button bars provide far too many options, clutter the screen and have icons whose functions need to be looked up before use. This, however, is not the case with PA.

The report window now has an option called 'screen' which will send your report direct to Edit or similar - very useful if you just want to look at some information and don't intend to print a report at all. You have always been able to do this but not as neatly as just clicking on the icon. Your machine must know where your text editor is for this to work, but for the majority of users who would use Edit, this will be the case. You can also select 'Balance' to give full debit and credit balance columns in a report.

The next two improvements relate to reconciling accounts. The first is that, on marking an item as reconciled, the cursor now moves automatically to the next unreconciled one, thus allowing you to do one-handed bank reconciliation! The second allows you to colour code all reconciled entries for easy location of unreconciled ones. This is fine if you choose a subtle grey as the colour, but a real shock to the system if you are daft enough choose bright yellow!

Most banks now have sequential cheque numbering which has never presented PA with a problem. Some, however, do not. This means that your new cheque book could have lower numbers than your previous one. If this were the case, having PA increment your cheque number by one, based on the previous highest it had seen could cause a minor confusion. You now have the option whether you use this method or enter the first cheque of each

**Apricote already had
an excellent program
here... v3.52 shows
their continued
support and attention
to detail.**

book manually, and let PA increment from there, based on the most recent entry.

The final modifications are a small change to the password entry, toggling the decimal point on or off, automatic opening of either the main menu window or the entries window, and fitting the window to the screen size automatically.

Some of the improvements that have been made, I have found very useful; others, whilst being just 'a nice touch' to me, may be a much more significant improvement to other users. Apricote already had an excellent program here, as I hope my original review

made clear and, if nothing else, v3.52 shows their continued support and attention to detail. My advice? If you have an earlier version, send in your disks and return postage for the free upgrade. If you don't have the program at all, can I just say that it can be a lot cheaper than unknowingly going overdrawn! ♦

This program is proving so popular that it is on special offer again at £35 instead of £49.95 to Archive subscribers. Ed. ♦

Voyage of Discovery

Denise Bates

Voyage of Discovery by Sherston Software is an adventure in space which teaches magnetism and electricity. It is applicable to National Curriculum levels 3 to 5 but optimum use will probably be obtained from the program with pupils of about eleven. Version 1.0 of the program was reviewed using an A5000 (RISC OS 3.1).

Manual

The manual provided is comprehensive. It covers installation instructions and gives full details of how to operate the software, the solution to the adventure for teachers and parents, and several pages of ideas for project work on the topics covered. There are also five photocopiable worksheets, two challenge cards which are designed to entice pupils into further practical research, and maps of the layout of the spaceship where the voyage takes place. All documentation is of a very high quality and should provide a wealth of ideas for a busy teacher or an interested parent.

Installation

Voyage of Discovery comes on four disks. No problems were encountered in installing the software to hard disk, but in order to run the software you need the start-up disk. A copiable disk is only provided upon purchase of a site licence although Sherston will sell a spare protected copy for £6. As

someone who resents being prevented from using the hard drive, I spoke to a representative of the company about this. He said that anyone who felt strongly about having to use the start up disk could obtain a copiable version if they contacted the company and provided proof of purchase. All in all, it is a cumbersome protection system because a school could conceivably set several copies running with a single start-up disk without bothering to purchase a site licence.

The voyage

Having expressed my reservations about the protection system for Voyage of Discovery, I willingly admit that this program is more than worth protecting. In the year 2056, the mission is to deliver an urgent package to the captain of the spaceship Discovery. With only two hours to go if the delivery company's agent is to collect a substantial bonus, the agent arrives on board the spaceship to find that the crew have disappeared. The only assistance comes from Boris, the on-board computer, who is behaving in a peculiar manner (and communicating in street-wise, idiomatic jargon which places the design prototype firmly in the 1990's!)

From this point, the delivery agent has to navigate his way around the ship's decks, occasionally assisted by Boris whose memory lapses are, fortunately, intermittent. By going to the library and watching several interactive, 'Open Universe' videos,

the agent is then able to apply the principles learned to overcome several problems which are encountered whilst searching for the captain and crew. Needless to say, the missing captain is located and the parcel delivered, just in the nick of time. The contents of the parcel, are, as you may already have guessed, memory upgrades for Boris!

The interactive videos

These are terrific. The graphics are excellent and the subjects are clearly explained. The subjects covered are magnetic attraction, magnetic poles and compasses, electricity: turning bulbs light, electrical safety and fuses, electric circuits and symbols, and electromagnets. Information is provided on screen with plenty of opportunities for pause and rewind built in so that each pupil can progress at their desired speed. Integrated with each lesson are a number of exercises which must be completed before carrying on with the voyage. In completing the exercises, pupils are asked to test various ideas by manipulating drawings of magnets or pieces of wire to complete circuits. My testers were fascinated by them and I am sure that they will remember the principles demonstrated. My regret was that I didn't learn physics like this twenty years ago.

Operating the software

Voyage of Discovery has an intuitive feel to it and is generally straightforward to operate by clicking on the on-screen icons or prompts. Before use in a classroom situation, explaining what each icon does will pay dividends, as would reproducing the relevant pages of the instruction booklet and leaving it at the side of the computer for the pupils' reference.

Assistance for teachers

The manual provides teachers with the solution. In fairness, groups of pupils will probably need pointing in the right direction as it is possible to wander aimlessly round the ship's corridors for some time. When we first tested the program at home, we tried to ignore the solution but soon found ourselves resorting to it to complete the journey in a timely manner.

The program also has a teacher control menu which can be accessed from the iconbar thus allowing the teacher to control the amount of help which Boris

provides during the game. There is also the option of turning the sound very low – invaluable in a classroom situation. The starting position can also be varied which is useful if you wish pupils to concentrate on the later stages of the game. It also allows just a portion of the game to be used where a teacher wants to limit the computer work to a particular topic which is being studied in class.

Use of the program

The program is intended to supplement other teaching and is not a substitute for other forms of practical work. It will be best used by small groups as this approach promotes collaborative problem-solving. Although the software can be run to concentrate on different sections (it is possible to save games to resume later) maximum benefit and enjoyment is likely to be achieved if an afternoon is set aside for a group to work their way through the adventure. I would also envisage Voyage of Discovery performing a useful consolidation and revision role after basic classwork had been done.

Ancillary aspects

Of the four disk set, disk four is a resources disk which contains a number of sprites and drawfiles which are used in the main package. These can be used in other work.

Throughout the program, the agent is periodically reminded how much time is left. This is not a real time clock and the agent always succeeds in delivering the parcel with minutes to spare.

It is worth bearing in mind that to go through the program from start to finish will probably take a couple of hours even if teacher guidance is given.

Conclusion

Voyage of Discovery is an excellent software package and worth a place in any school's software library. Other than my niggles about the software protection system and Boris's contrived streetwise language (and I admit these are personal views) I have not been able to find anything to criticise.

Voyage of Discovery costs £31.95 +VAT or £36 through Archive for a single user. The cost of a site licence is double the single user price for primary schools and three times for secondary schools. ♦

Text Import and all that...

Jim Nottingham

My postbag was especially busy following publication of the Text Import articles in Archives 8.3 to 8.5, much of it to do with using Edit's Find/Replace function for general data-processing rather than purely for text import, hence the open-ended title of this article. Many topics were raised more than once, so it may be of general value if these are included here as comments, hints and tips, etc.

Erratum

A careless error crept into Part 1 (Archive 8.3) for which I apologise. The ASCII hex codes given for the top-bit set in the table on p64 were screwy; against the decimal codes 160-255, they should have read **&a0-&ff** inclusive.

Alt key inoperative

A couple of readers with RISC OS 3.10 said they couldn't seem to get their Alt keys to work in order to enter top-bit set characters. If you hit this problem, the likely reason is that someone or something (often a PD game) has rudely unplugged your International Keyboard module.

To check if this has happened, press <f12> and type **unplug<return>**. This will tell you which modules (if any) have been unplugged. If necessary, reinitialise the International Keyboard by typing **rmreinit international<return>** at the prompt, and the Alt keys should then work.

Character select utilities

We discussed Acorn's !Chars utility in Part 1 and I was pleased that Ed added the Health Warning about the Shift key! A number of readers were critical of certain

aspects of this utility, in particular that it was often difficult to find a particular character in the 'busy' window. I mentioned that there are alternative programs and you might like to consider a couple of these.

Beebug have very kindly agreed to allow !CharSel to be distributed to Archive readers via the monthly disk.

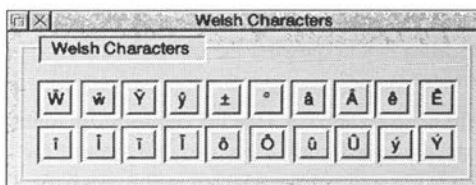
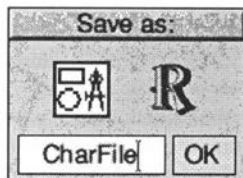
Anyone using Ovation will have received !CharSel in the bundle. This is similar in use to !Chars (including the Shift key gotcha) but adds a couple of handy features. Firstly, as you point at a character in the CharSel window, the ASCII decimal number is shown in a small 'bubble' under the pointer. If you know the approximate ASCII code ("I think it's 1-5-something..."), this feature makes it much easier to find the specific character, especially the 'invisible' hard space (ASCII 160).

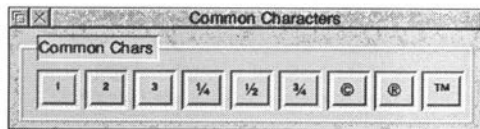
Secondly, if you point at a character in the CharSel window and click on <adjust>, a save box is opened, allowing you to export the character as a drawfile. You may find this is a convenient option to help introduce drop capitals into a document, for example, especially as you can call up a font in the CharSel window which is different from the body font of the document.

Beebug have very kindly agreed to !CharSel being distributed to Archive readers via the monthly disk (or available from me). However, copyright must remain with Beebug, so please do not pass it on to non-subscribers.

The display windows of both !Chars and !CharSel present the full ISO 8859 character set (ASCII codes 0-255), including printer codes and all the characters on our keyboard. A couple of readers mentioned that, as we may wish to use the utility only for entering top-bit set characters, (ASCII codes 128-255), this is a bit heavy-handed.

Gareth Edmondson has come up with a rather elegant solution called !MultiChars, which not only





restricts the available characters to the top-bit set, but also thins out many of the more esoteric offerings (e.g. j and z) and presents the remainder in seven 'language' groups – Danish, French, German, Norwegian, Spanish, Swedish, Welsh and what he calls 'Common'.

From the icon bar menu, you can select one or more of the window displays. Characters can be entered into the document by clicking with either <select> or <adjust> and, to preserve our document's health, pressing <shift> does *not* enter a spurious character!

All in all, a very natty utility which is included on the monthly disk (or available from me) but do please note this is Shareware, *not* Freeware. That said, the registration fee is a mere £1 and, as Gareth is an impoverished student (shame...), I'm sure he would welcome your payment.

Accents

There seems to be some confusion about the way the Acorn font manager handles accented characters. I believe that some other platforms mechanise it by combining the base letter with a generic accent. Our font manager relies on all these letters being included within the font as composite characters, the obvious disadvantage being that, if the accented character is not included in the character set, it can't be reproduced conveniently. For example, not all of the Welsh accented characters appear in the majority of fonts. Indeed, letters such as , , and, are not in the ISO 8859 character set and I think are included only in System and some outline fonts of British manufacture (e.g. EFF fonts and the Acorn RISC OS 3+ set).

The main advantage of having the font include the composite characters (such as é) is that the accent element can be designed individually, to blend with the character design, rather than a generic accent having to be used. For example, the circumflex in the ê character is quite different from the keyboard ^ character:



If a particular character is not included in the character set of the font we wish to use, one way of 'tweaking' it would be to modify or add to the font set by using Acorn's FontEd or a similar utility.

'Foreign' text import

Turning to reader-comments from the main body of the articles where we discussed converting imported text into Acorn-speak, these fell into well-defined areas so it may be worthwhile discussing these in some detail.

However, before doing so, I really ought to correct any impression I may have given, in rather glibly using the term 'Acorn-speak', that the resultant text is readable only by Acorn machines. This is certainly not the case. What we achieved in the massaging was to reduce the file(s) to pure ASCII text, with all the 'scribble' (formatting commands, printer codes and so on) stripped out. Apart from paragraph spacing, this included removing the line-feeds.

So, if we wished, we could then re-export the file to any WP/DTP package worth its salt where it would be fully readable on IBMs, IBM-compatibles, Macs, Ataris, lap-tops, etc, etc. All we would first need to do is to reset the filetype from Text back to DOS, using the reverse of the procedure covered in Part 2, and save it on a disk, formatted to MS-DOS. More on text export later.

Why use Edit?

A couple of correspondents asked whether they could do the text-massaging within their WP or DTP package as these had a find/replace function. In principle, there is no reason why not, and it may be very convenient to do both the massaging and the editing/layout in the same package.

However, although you may well find your package will allow you to perform simple find/replace functions such as stripping out line-feeds, more complex 'scribble' may prove impossible to remove. For example, in both the packages available to me – Impression Publisher and Ovation – embedded printer codes are not reproduced on screen whereas, in Edit, they are clearly displayed by their hex codes

(e.g. [0d]). The point being that, if they are not displayed, we won't know they are there and, more importantly, we won't know what to strip out. So when we come to print the document, the result may well be corrupted by the 'hidden' codes.

Which leads me to a further point about these unwanted codes possibly being injurious to our document's health. I bought Impression Publisher around the time I started working on these articles and, in so doing, repeatedly imported many of the 'foreign' samples. Much had been said in Archive and elsewhere about Publisher's instability, so I wasn't all that surprised that it kept crashing on me.

However, subsequently, I grew to suspect that, once the files had been pre-massaged in Edit, Publisher's crash-rate dropped markedly. Unfortunately, the crashes were not consistent, so I was unable to give Computer Concepts any definite clues but now, as a matter of course, I always pre-load 'foreign' files into Edit, massaging them into pure-ASCII text as necessary, before transferring them into Publisher or Ovation. I believe that this has helped reduce Publisher's crash-rate to an acceptable level and, in some ways, is similar to doing a virus check before using unknown files.

(My theory is that as you go on using Publisher, you gradually use fewer and fewer pre-Publisher files and it is this that reduces the error rates. Certainly, CC have acknowledged that there was a bug in Publisher, related to importing Impression II documents, although this has now been fixed. Ed.)

"Not Found"

The trouble spot which featured most regularly in correspondence was the "Not Found" message appearing in Edit's Find text window. As the message suggests, it means Edit is not finding any occurrence of the Find string although, somewhat confusingly, the message does not appear until we fill in the Replace with box and press <return>.

Having looked at a number of samples readers sent in, I found virtually all of the hiccups were due to one of two causes. Firstly, when the magic characters system is being used, a backslash (ASCII 92) is used to pre-warn Edit that the following character is a 'control', e.g. typing <\n> will

represent a linefeed (newline) command. The problem is that the backslash also appears quite commonly in the 'scribble' of imported text, so we will often wish to enter a backslash as part of the Find string.

The catch is that Edit is unable to differentiate between whether the backslash is actually part of the Find text string or whether it is being used as the precursor to a 'control' character. It therefore assumes the latter, gets confused and puts up the "Not Found" message. To a lesser extent, using the wildcarded expressions system can lead to similar problems. There are two ways of avoiding this situation:

- If the 'Replace with' string does not need to contain any control characters (e.g. Newlines), we can deselect both the Magic characters and Wildcarded expressions radio buttons; this causes Edit to see the backslash for what it is – part of the wanted Find string.
- If we do need to enter control characters in the 'Replace with' string, we can continue to use the Magic characters or Wildcarded expressions options but, every time a backslash appears as part of the Find text string, we should type in a *double* backslash – <\\>. This tells Edit that the following character is not a 'control' and will look for it as a normal character (ASCII 92).

◇ Magic characters		◇ Wildcarded expressions	
Any .	Newline \$	Alphanumeric @	Digit #
Ctrl	Normal \	Set [	] Set
Not ~	0 or more *	1 or more ^	Most %
To -	Found &	Field# ?	Hex ☐

The same procedure applies to any other normal character we wish to put in the text string which might interfere with the 'control' characters used in the Wildcarded expressions system. This includes the full stop (representing 'Any'), the ~ swung dash (representing 'Not') and so on.

In every case, if we wish to input the character as an actual part of the Find text string, preceding it with

<|> tells Edit the character is 'normal', not a control character.

The second common reason for Edit throwing up a "Not Found" message is where there is an error in the Find string we have entered, especially if we use the Wildcarded expressions 'Any' function, i.e. typing in a full stop to represent 'any character'. Referring back to an example we used in Part 3, we defined a complex, 17-character Find string by typing the first and last characters, separated by 15 full stops (Archive 8.5 p17). It follows that we must correctly count and enter the number of characters in the Find string – 17 in this example – otherwise Edit will not do what we want.

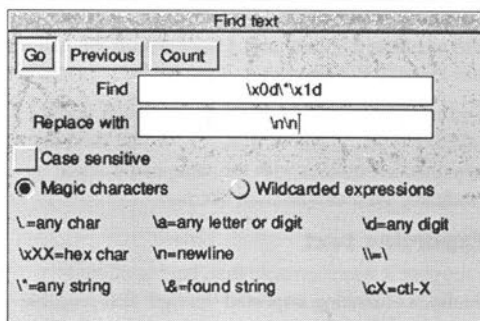
Take the following as another example of where we can get it wrong; it's the string used as the paragraph separator in the Example 2 file which we wished to globally replace with double linefeeds:

```
blah blah.....end of paragraph[0d]
[0d]
[1d]
[00][09]D[02]@[02] [05]
[00][1d]Start of next paragraph.....
```

At first sight, this may appear to consist of 12 characters (each hex code counting as one), so you might type in the first [0d] and last [1d], separated by ten full stops – and wonder why Edit says "Not found"... However, if you look again, there are actually five 'hidden' characters! Firstly, there is the space (ASC code 32) in the fourth line – very easy to miss if you are using a proportional font in the Edit window. Secondly, there are four linefeed characters, one at the end of each line. So the whole string actually consists of seventeen characters; twelve visible to us and five 'hidden'. Edit does not differentiate between them so, in this case, we must type in the first [0d] and last [1d], separated by *fifteen* full stops.

Use of "any string"

Following on from the above, two readers asked if there was an easier way of entering a lengthy string such as the one above without having to type in the exact number of 'Any' full stops. Well, there is, but it must be used with caution if you are to protect the health of your document, so the usual rule of making a back-up applies even more here! By exercising



great care, I've used it successfully to reduce PostScript files to the point where they could be read sensibly.

The procedure is to select Magic characters and use the "any string" option which allows you to enter * to represent a string of indeterminate length. Thus, in the above example, we would type \x0d in the Find text box to represent the leading hex character, * instead of the fifteen full stops and \x1d for the last hex character. So the Edit window would look like this:

Let me stress that using * will 'find' *any* string of characters, of *any* length, and only adding the leading and trailing characters will make that string unique. Potentially, using this option can have a catastrophic effect, so click on Replace once or twice, rather than 'End of file replace'. Then, before clicking on 'Stop', do carefully double-check your Edit document has not been scrambled. If the worst does happen, click on 'Undo' instead and the health of your document will be restored, allowing you to revert to using the safer option discussed earlier. You have been warned!

PhoneDay – update

In Archive 8.7 p17, I offered a DIY method of updating STD code utilities to incorporate post-PhoneDay codes, using Edit's find/replace facility, but mentioned that I couldn't see a way of avoiding having to make other changes manually. Well, Ted Lacey had already done the considerable spadework to do just that (same issue, p9) and has very kindly sent me a copy of the outcome. As a result of Ted's efforts, this version of !STDFinder (v2.01) is rather more up-to-date than the one on the March disk, so

the new version is included on this month's disk. It is also available from me and, I understand, the APDL and Datafile PD libraries.

Ted mentioned an ambiguity in the similar utility called !Exchange but we now believe that there are two different utilities with the same name. Very confusing for a simple chap like me!

Exporting text

I suppose it was inevitable that, having offered methods of making imported 'foreign' text readable by Acorn WP/DTP packages, I should be asked about exporting documents from Acorn to other machines.

Apart from sending out PostScript files, I don't do this as a matter of course but, from an admittedly superficial viewpoint, I don't think there's a significant difference between import and export. That is, if we simply export direct from an application like Impression or Ovation, we will inevitably export all the formatting and printer commands embedded with the document and, therefore, this will appear as the equivalent 'scribble' to the receiving package. I've had a brief look at using read and write versions of Rich Text Format (RTF) utilities without a great deal of success but, to be honest, have not delved deeply into the problems.

As far as exporting text is concerned, I believe that users of Acorn machines have the advantage here in that, as far as I know, there is no utility available for, say, IBM-compatible machines which is as productive and convenient as Edit for removing the scribble – or as cheap! Can anyone offer any ideas on this?

Perhaps, therefore, when we export a document to another user (including Acorn owners who may not necessarily use the same WP/DTP package), we should do the decent thing and make a point of making the document as readable as possible to the person at the other end. Firstly, we can separate the text from the illustrations which, in general, is very easy to do. For example, in Ovation, instead of saving the full document to disk as normal, we can save just the text by selecting – not surprisingly – "Save as text". The result is a simple stream of text, in standard ASCII format, without printer codes or most formatting commands. I say "most" because,

although end-of-line formatting commands are stripped out, single or multiple linefeeds representing paragraph breaks are retained.

This is great because we can put the file onto a floppy disk, formatted to MS-DOS, and it should then be perfectly readable by anyone with a 'foreign' computer or WP/DTP package, if the filetype has been changed to DOS.

Exporting from, say, Impression Publisher is almost as straightforward. In this case, the equivalent save command is "Save text story" (<ctrl-f3>). In this case, before saving, it is necessary to deselect all the radio box options (as applicable) to ensure linefeeds, carriage returns and styles are not exported with the text. However, as with Ovation, paragraph breaks are retained.

Exporting documents

Having exported readable text, it remains to export any illustrations in 'PC' formats, using facilities such as John Kortink's !Creator or Artworks' Export options. Typically, this might be TIFF for bitmap files and EPS for vector graphics.

A significant advantage here is that, having separated the document into text and a number of graphics files, these can be exported via as many floppy disks as are required; useful when – as so often happens – the document is too big to fit onto a single floppy. In all cases, it helps to send a hard-copy printout of your document, enabling the recipient to reconstitute and reformat the document from the individual files.

As a corollary, I commonly find these procedures are a very convenient way of taking a back-up copy of a document which is too large to fit on a floppy. Saving illustrations as separate graphics files and then regularly using "Save as text" ensures I can quickly reconstitute the 'big job' in the event that the hard disk falls over.

Please keep the interesting ideas and queries coming. If anyone still wants a copy of the examples files used in the original Text Import articles, !CharSel, !MultiChars or the updated !STDFinder utility, please send me a formatted disk with return label and postage. Jim Nottingham, 16 Westfield Close, Pocklington, York, YO4 2EY. ♦

Programming Workshop

Matthew Hunter

Since the last programming workshop column, many of the questions I have received have again been about changes to graphics handling on the Risc PC. While several of them have been covered previously, some new information has come to light.

Changing mode

The biggest problem still seems to be the way in which the MODE "Xx Yy Cc" command works since it differs from the MODE m in several ways. The palette is set to the Wimp palette appropriate for the number of colours, and if text is displayed using PRINT, it appears in a standard task window, rather than at the top left of the screen. Text size is also affected – standard text is likely to generate a smaller font than text printed at the graphics cursor.

The easiest way around this problem is to set the mode twice. If you wish to use the older BBC palette, change by using the number the second time, e.g.

```
MODE "X800 Y600 C16"  
MODE MODE
```

When used as a variable, MODE contains the current mode number.

You will find that the text window is full screen as expected, and the palette will be set correctly. Text will also be the same size printing at either the text or graphics cursors.

If you wish to use the Wimp palette, but do not want to have the taskwindow set up, simply ensure that you create some output *before* changing mode, e.g. using

```
PRINT ""  
MODE "X800 Y600 C16"
```

will set the mode as required with the Wimp palette, but a full screen text window, and printing text at the graphics cursor, will scale the text to be the same size as the system font appears on the desktop.

Sprites

Sprites have been covered in Archive previously, but we have had enquiries regarding their use recently,

so I will give a quick overview here. In order to use sprites, they must be loaded into memory. For non-desktop applications, this means creating a user sprite area and loading a spritefile into it.

```
DEF PROCloadsprites(spritefile$)  
DIM sprites% 32768  
!(sprites%+0)=32768  
!(sprites%+8)=16  
SYS "OS_SpriteOp", 9+256,sprites%  
SYS "OS_SpriteOp",10+256,sprites%,  
spritefile$  
ENDPROC
```

Here a fixed amount of space is being allocated, although ideally you would look at the size of the file and allocate enough space, otherwise changes in the sprite file could require changes in your program. Before the area can be initialised, the size of the area and the offset to the first sprite must be filled in. The first SpriteOp (9) initialises the area, and the second (10) loads the specified file. 256 is added, since we wish to use a user sprite area rather than the system sprites.

A basic sprite plot can be achieved with SpriteOp 34:

```
DEF PROCplotsprite(sprite$,x%,y%,plot%)  
SYS "OS_SpriteOp",34+256,sprites%,  
sprite$,x%,y%,plot%  
ENDPROC
```

When using it, however, it is important to make sure that the mode you are currently in has the same number of colours, the same pixel aspect ratio and the same palette as the sprite being plotted. If you don't, the sprite may be stretched or squashed, and displayed in odd colours – the simple plot used here assumes that no translations are necessary, and is correspondingly faster. The plot code specifies how the sprite will be placed on the screen. Any value between 0 and 7 is valid, the most common being 0 (overwrite the current screen colours) and 3 (exclusive OR the current screen and the sprite). If you add 8 to the code, only pixels which are not masked will be written.

Further speed can be obtained by using a pointer to the sprite rather than the sprite name, which

removes the need to search for a particular sprite every time it is plotted. This makes the plot a two stage process – first the location of the sprite in memory must be found, then the sprite can be plotted.

```
DEF FNselectsprite(sprite$)
LOCAL ptr%
SYS "OS_SpriteOp", 24+256, sprite$, sprite$
                                TO , ptr%
=ptr%
:
DEF PROCspritepointer(s%, x%, y%, plot%)
SYS "OS_SpriteOp", 34+512, sprite$, s%, x%,
                                y%, plot%
ENDPROC
```

Initially, this appears to be wasteful, since there are now two procedure calls. However, `spritepointer` can be called several times after one call to `selectsprite`.

A couple of points that are worth noting. `Spritepointer` uses '+512' in this case, since the sprite is being accessed by pointer and not name. The pointer returned by `selectsprite` is only valid until the sprite area is changed, for example by merging a `spritefile` or deleting a sprite.

This should be enough to get you going. If you want to know something more specific, please write in with your suggestions.

Basic animation

One question I have been asked involves moving sprites around the screen. To move a sprite around a blank screen is quite simple.

```
FOR x%=100 TO 500 STEP 4
CLS
PROCplotsprite("test", x%, y%, 0)
WAIT
NEXT
```

The `CLS` ensures that the previous sprite is removed, and `WAIT` causes the program to wait until the beginning of the next screen refresh before redrawing, to reduce flicker. It is more complicated, however, if you wish to move the sprite across a background, since `CLS` will remove that too. If you have a lot of moving objects it is probably more efficient to replot everything, including the background, each time round. However, with only a few objects, it is better to grab the part of the

background which will be hidden. That section can then be plotted next time round to remove the foreground sprite. The following procedure grabs an area of the screen as a sprite.

```
DEF PROCgrabsprite(s$, x0%, y0%, x1%, y1%)
SYS "OS_SpriteOp", 16+256, sprite$, s$, x0%,
                                y0%, x1%, y1%
```

```
ENDPROC
```

As long as the sprite "test" is less than 100 OS units in the x and y directions, the animation loop can be written

```
FOR x%=100 TO 500 STEP 4
  PROCgrabsprite("back", x%, y%, x%+100, y%
                                +100)
  PROCplotsprite("test", x%, y%, 0)
  WAIT
  PROCplotsprite("back", x%, y%, 0)
NEXT
```

You can experience speed problems with this technique, especially where large sprites are used, and the movement occurs close to the top of the screen. The reason for the first is obvious; the larger the moving sprite, the larger the amount of background that needs to be grabbed and replaced.

The second problem is far more evident on the Risc PC, although the earlier machines can suffer from it. The `WAIT` command halts the program until the computer starts the next screen refresh, the old background is then plotted, the new background is grabbed and then the sprite being animated is plotted. During this time, the computer's video system is reading the data from the screen memory, and sending it to the monitor. The problem occurs because the two are happening simultaneously. If the area you are changing is close to the top of the screen, it may already have been displayed by the time the changes are complete, so the result flickers.

This is worse on the Risc PC since the frame rate can be higher, and therefore the screen is read from memory more quickly; therefore the 'danger area' (i.e. the area from the top of the screen to the position of the scan when the update is complete) covers more of the screen. You can reduce this by specifying a frame rate in your mode string, to slow the scan down and reduce the danger area.

Dual screen banks

A common practice for animation is to use two screen banks, the first visible while the second is updated, and vice versa. That way the screen is not changing under the scan. This requires two procedures; the first sets up the screen banking, and should be called once at the beginning of your animation, the second swaps banks, and needs to be called between each frame, usually the first command after the WAIT.

```
DEF PROCscreenbankinit
  PROCsbasm
  SB_bank%=1
  SYS 6,113,SB_bank%
  SB_bank%=3-SB_bank%
  SYS 6,112,SB_bank%
  !(bank)=SB_bank%
ENDPROC
:
DEF PROCswapscreens
  SYS 6,113,SB_bank%
```

```
SB_bank%=3-SB_bank%
SYS 6,112,SB_bank%
ENDPROC
```

The monthly disk contains an application (!Smiley) which demonstrates these effects. It is designed to be run in a 640x480, 16 colour mode (Mode 27 for pre-Risc PC machines) but does not change mode itself, so you will have to set it first. There are a couple of minor changes. The first checks to see that there is enough screen memory to hold both screen banks, and tries to allocate more if not. The second is that the screen banking code has been rewritten in Assembler, since the Basic was not fast enough in the high refresh modes on the Risc PC. You can see the difference by un-REmIng the PROCswapscreens line and REMing the CALL screenswap.

That should be enough to be getting on with, so keep the ideas coming in for next time. ♦

Lottery Software

Colin Singleton

PC software associated with the National Lottery started appearing before the Lottery got under way, including, sadly, some charlatans claiming to *tilt the odds in your favour*, or some such phrase. Acorn software arrived more slowly, and the four packages currently on my icon bar appear ethically clean, although the accompanying texts do betray some misunderstandings of probability, and two of the packages declare their purpose to be to win lots of money.

The first arrival on my doormat was **!ottery!**, ©**Cherisha Software** (Rebecca Shalfeld), at £3.00, plus the same again for each new version. The latest release of this package appears to have corrected the bugs in the program, but not in the literature! The number of different possible entries is designated mathematically as ${}^{49}C_6$, which you can evaluate by selecting this function in !SciCalc. It is $(49 \times 48 \times 47 \times 46 \times 45 \times 44) / (1 \times 2 \times 3 \times 4 \times 5 \times 6) = 13983816$, not 14003300 – the divisor is 720, not 719.

Then, priced at £1.50, came **!Lottery @Ben Ollivère**, who seems so determined not to receive any correspondence that he has omitted both the post town and the county from his published address! No such bugs in his program – it doesn't do much, but it does it very prettily.

Next, **!Aprilot**, PD from **Apricote Studios**. Quentin Pain has offered this for the Archive Monthly Disk, and asked me if I can suggest any really constructive features for Lottery software. In the absence of any data indicating punters' most (and least) popular numbers and combinations, I am rather at a loss. I have written to Camelot, and am keeping my fingers crossed.

Finally (to date) **!Lottery**, Shareware ©**Paul Vigay** (aka Digital Phenomena), Registration Fee £5.00, upgrades free in exchange for a blank disk. The clash of unimaginative names produces two identical icons on my bar, but no more significant problem. This package has the best displays and the most interesting statistics.



Three of the packages (not Ollivère's) require me to enter the results of each week's draw, but only ApriLot tells me the date of the next draw (the others expect me to enter it, and allow me to get it wrong). Only Vigay allows me to correct earlier errors – with the other two, it's just tough luck!

Then come the 'statistics'. For Otteryl and ApriLot this is merely a pretentious term for counting the number of times each number has been drawn. Aprilot offers a choice of logical sequences for this list. Otteryl offers only one, very strange, sequence, and also allows me to save the list as a CSV file for export to a graphs package. Vigay's program is more informative – it displays the frequency data as a natty bar chart, though I haven't figured out the significance of the choice of colours. It also tells me the split between odd and even numbers, top and bottom halves of the ticket, and blocks of ten numbers (but don't forget that there are more odd numbers than even, etc). He also lists every combination of two or more numbers which have occurred in the same draw twice, but unfortunately does not explicitly identify those groups which have occurred three times. At present only one sub-set of four numbers has been drawn twice – 3, 5, 14 & 30 were drawn in Week 1 and Week 5. I think the list of pairs could quickly become excessive, and uninteresting.

All the packages offer 'prediction' facilities, indeed, this is the only function of Ollivère's program. At this point, can we please get one thing straight? Previous winning numbers cannot in any way affect future draws! All the packages except Ollivère's offer an option to give preference in their predictions to 'hot' or 'cold' numbers – those which have been drawn more or less frequently than average. Vigay's notes clearly intimate that combinations which have been successful in the past should have a better chance than others in the future. ApriLot's notes, less clearly, suggest the opposite!

Forget it! The next draw is just as likely to be 1, 2, 3, 4, 5, 6 as 13, 20, 28, 34, 42, 46 (unbiased random numbers) – or an exact repeat of last week's draw! For those who are interested in hot and cold numbers, Otteryl gives precise yes/no definitions of

hot (a number which has been drawn three or more times in the last five weeks) and cold (not drawn in the past nine weeks). The first is so restrictive as to be useless – only one week in three will there be more than one hot number on this definition, and one week in three there will be none. The other packages refer vaguely to numbers drawn frequently or infrequently, and such 'fuzzy logic', if suitably programmed, is surely appropriate.

Ollivère, unlike the others, proceeds by generating thousands of random numbers (how many is up to you) then offering as his prediction the six which occurred most frequently. The program displays, and progressively updates, a graph showing the frequency of each number, which can be printed at the end. A bar chart would, I think, have been more appropriate. That, basically, is all there is to it! May I suggest an alternative?

```
FOR I = 1 TO 6 : PRINT RND(49) : NEXT I
```

 Try again if it gives any number twice. Sorry, but I can see no effective difference between six random numbers and the most frequent six of several thousand.

ApriLot offers no parameters for its predictions. It always offers five lines, one random, one 'hot', one 'cold', one mixed hot and cold, and a fifth (questionably labelled 'best') combined from the first four. Vigay offers single, optionally biased, lines and a 'Block Guess' facility. This comprises several entry lines which, collectively, would have been very successful in the draws to date – deliberately based on the fallacy noted above!

Otteryl offers a choice of 1, 4, 7, 10 or 13 prediction lines. The multi-line entries are obtained, Football Pools style, by selecting 8, 9, 10 or 11 numbers, then selecting the appropriate number of lines of six from these, designed to ensure that if the overall selection contains three correct, then these will appear together in at least one line. This, according to the blurb, "... maximises your chances of winning one or more £10 prizes". Another goof, I'm afraid. Overlapping, rather than independent, entries *reduce* your chance of winning *one prize or more* (at any level except Jackpot). To put it another way, this technique *increases* your chance of winning *nothing!* By way of compensation (and by the laws of

**Previous winning
numbers cannot
in any way affect
future draws!**

probability there must be one) it *increases* your chance of winning *more than one* prize in one week.

Ottery! is the only package of the four which allows me to enter my proposed entry and read its comments. A sneak peek at the Messages file reveals its repertoire of responses, and suggests that this feature is rather less helpful than perhaps it might have been. About 99% of the time it will reply "You have chosen your numbers well". [P.S. What, please, is the 'fizz-buzz' sequence? Is it good or bad?]

Vigay's !Lottery offers an option to print its guesses directly onto the Playslip [N.B. *not* Payslip!], but it doesn't seem to be on speaking terms with my LaserDirect. It apparently insists on changing my *Direct* connection to *File: Null*, so nothing happens, except that my printer goes dead!

Three of the packages, very sensibly, come with disclaimers repudiating any suggestion that they might help you win the Lottery. Ottery! and Aprilot, nevertheless, acknowledge in their notes that you can influence your potential winnings by choosing unpopular numbers or combinations, although there is little any program can do to help. Your chance of winning a £10 prize is once in 56+ entries. Similarly, your chance of winning a Match-4 prize is one in 1032, Match-5, one in 55491, Bonus Prize, one in 2330636, and the Jackpot, one in 13893816. **You cannot change these odds**, but you can, perhaps, reduce the number of others who will share your prize if you do win (except for the £10 prize, which is fixed).

An unpopular combination of numbers is just as likely to be drawn as a popular one, but there will be fewer winners to share the Prize Pools. The Match-4 prize, for example, has varied from £16 to £164, solely because of the numbers of winning entries. The statistically expected average is £62. The highest (but fewest) prizes were paid in the week when all the numbers drawn were in the bottom half of the ticket, the lowest when the numbers were 7, 17, 23, 32, 38, 42 – I am at a loss to know why these should be so popular! In one week, the small prize winners were more numerous than expected, but the higher ones less numerous, caused by popular numbers in an unpopular combination. There is more to this than meets the eye, and a very comprehensive analysis of actual entries would be needed to offer any advice to punters.

The National Lottery is frustrating, and not just because of the elusiveness of its prizes. It seems such an 'obvious' candidate for some form of software but, on further investigation, it appears that your computer can do little which cannot be done almost as easily with pencil and paper. I kept asking myself "Why has anyone bothered to write this program?" They are all WIMP compliant and multitasking, and represent a lot of effort for, seemingly, little benefit. They would probably be best distributed either as advertisements or disk-fillers.

Conclusion

Paul Vigay's !Lottery has the edge over the others by a reasonable margin. ♦

TableMate 2

Dave Floyd

TableMate 2 is a package from Dalriada Data Technology which aims to simplify the creation of tables for use in Impression or other DTP packages. It costs £32.50 or £17.50 as an upgrade to TableMate for a single user copy. A primary site licence costs £40, a secondary licence is £70 and there is also the option, in addition to the licence, to pay an extra £5 or £10 respectively which allows the teacher to use the software at home and make

copies of the manual. Discounts on the site licence prices are also available for owners of the original TableMate.

Improvements

Those who own a copy of Impression will have found the original TableMate bundled in as part of the package. As an occasional user of tables within documents, I thought that this was a most useful idea, until I actually came to use it. A couple of attempts later, TableMate was unceremoniously

deleted from my hard disk and I contented myself with creating styles within Impression whenever I needed to present data in tabular form. TableMate 2 is a vast improvement over its predecessor and it is pleasing to see that, what was undeniably a good idea, has also developed into a very useful utility.

Word wrap within columns has now been implemented with the rows automatically expanding to accommodate the extra lines of text. This can be very fiddly to do within Impression or with many spreadsheets and it allows for large savings in time when creating tables. Tabs can be set to allow the display in any column or individual cell to be left or right justified, centred or, for numeric entries, a decimal tab is also provided.

Drawfiles can now be placed inside a cell, if you need to add graphics to your table. Sprites can also be used, although you first have to drag them into a draw window and save the resultant drawfile. Full scaling facilities are provided in TableMate 2 so you can adjust the size of the image without having to keep going back to Draw. The graphics side of TableMate 2 works very well indeed and I am sure that this will be of much use to primary schools, especially.

The addition and deletion of multiple rows and columns has now been implemented and full colour control is now available, allowing you to adapt the colours of the cell background, text and separating lines (rule-offs) within your table. The width of rule-offs can also be adjusted and cross column headings can easily be added, to provide the final polish to your table.

The cut and paste facilities will be familiar to any Acorn user who has used Impression or Edit, amongst others, and conforms to the generally accepted standards set by these packages, such as <ctrl-X>, <ctrl-C> and <ctrl-V> as key combinations to cut, copy and paste respectively. Row height and vertical positioning of text can, should you so wish, be specified in absolute measurements, and the package now allows multiple document editing, up to a limit of sixteen tables at any one time.

Data can be imported into TableMate 2 in the form of CSV, TSV or SID files or entered directly as you

would into a spreadsheet, for example. The importing of data works perfectly, with both rows and columns being automatically added by the software as required. Saving of completed tables can be in Impression DDF format, Draw format or as a TableMate file, essential if you may need to modify the table at a later date.

Criticism

There is very little to criticise about TableMate 2 as a package. The only problem I had was with the manual. Forty pages long, it is not so much a manual as a tutorial. Whilst this may be ideal for a beginner to computing, it can become frustrating when trying to find out how to use one specific function. The addition of a quick reference section at the back and a detailed index would improve matters greatly in this respect. Having said that, the software is reasonably intuitive and the only real need I had to refer to the manual was due to the visual similarities that TableMate 2 shared with Impression. It can be very easy to forget that it is not Impression at times and that, in order to achieve a desired effect, you have to approach the problem slightly differently.

Wish list

Following the great strides made by Dalriada Data between the releases of version 1.10 and 2.0, I hope they do not now rest on their laurels and stop upgrading TableMate. One extra function I would like to see in version 3 would be fully justified text within columns. The addition of simple spreadsheet functions, such as the ability to automatically total columns as you enter the data, would also be very useful, especially if this were expanded to include addition of time as well as decimal values. Even a function that allowed you to select a range of cells and total them all after entry could only enhance the usefulness of what is already a very useful utility.

Conclusion

If you have any need to compile tables for use within a DTP environment, TableMate 2 should prove to be an indispensable addition to your software collection. Those who tried and could not get along with version 1.10 should not allow themselves to be put off by the inadequacies of the earlier release. TableMate 2 supplies almost everything one could

wish for and, with such ease of use, that even the awkward manual does not hold back productivity for

long, if indeed, you need to refer to it at all. Possibly an essential purchase. ♦

Wolfenstein 3D

Andrew Rawnsley

The release of Wolfenstein 3D represents the culmination of about a year's work porting the game from its PC roots. However, the company behind this conversion isn't one of the regulars – Krisalis, GamesWare or VTi, but a newcomer – PowerSlave Software, headed up by Eddie Edwards, a new talent in Acorn programming.

The PC origins

Wolfenstein 3D has been available on the PC since the middle of 1993. In its day, it was thoroughly ground-breaking, being the first game to make use of ray casting and texture-mapped graphics. For the first time, players could have freedom of movement in 3D worlds. The first ten levels were also released as shareware – a shrewd move on the part of the publishers.

The game has now been superseded by the Doom series, from the same company (ID Software) but it is still a classic game, and great fun to play.

Acorn users have only been exposed to a small amount of this kind of 3D environment. 4th Dimension's The Dungeon achieved it quite well, but was let down by the artwork.

The game

OK, so it's technically ground-breaking and graphically impressive but this doesn't automatically make it a good game.

The plot has you taking the part of an American soldier locked away in the dungeons of Castle Wolfenstein. However, one hapless guard made the unfortunate mistake of opening your cell door to feed you. His early demise equipped you with the cell keys and, rather more usefully, a pistol.

Your objective, then, is to explore the castle and try to escape but, at the same time, load your pockets with Nazi gold, and dispatch as many enemy scum

as possible. You might even get a crack at old Adolf himself.

This is an outline to the first scenario (the shareware 10 levels), and is the main storyline. The five extra levels supplied in the full version (the only version available on the Archimedes) have you going back into different parts of the castle with the objective each time of stopping yet another Nazi masterplan. Needless to say, the original had a few problems in Germany.

For once, the background is fairly sensible, rather than being a load of codswallop about saving the known universe.

Installation

Wolfenstein 3D comes on three disks (big for an Arc game!), which can be installed onto a hard drive, but you'll need the main program disk to navigate the protection.

Running the game installs it on the icon bar (a good habit), so that the options can be set up, and a further click takes over the full screen and starts the introduction.

Once the game has loaded, you can set up the game's options: keys, sound and music levels and, for users of slower machines, the size of the view window. The smaller the window, the faster the game runs on a lower spec machine. An ARM 3 machine or Risc PC can easily cope with the maximum window size.

Finally, you select which episode to play, and the degree of difficulty.

Gameplay

Needless to say, the main priority in the gameplay is to shoot the guards and finish the levels. However, puzzles are introduced by the need for keys to open locked doors and, for those not content just to finish the level quickly, there are mazes leading to better

weapons, extra lives, food and treasure. Oh, and don't forget the secret doors and levels containing even more goodies.

Provided you have set the viewing window size to suit your machine, the game runs very smoothly, and at a good pace, allowing you to get fully immersed in the proceedings.

Sound and music

The music takes the form of Soundblaster tunes, so Eddie was forced to write a Soundblaster emulator. Unfortunately, the music is pretty unimpressive, but I think this is a flaw in the original. The sound effects, however, are top notch and the samples of the Nazi guards are very atmospheric.

Criticisms

I've tried to refrain from saying it up till now, but this game is violent. Shooting a guard releases a fountain of blood (red pixels, actually), and the

corpse lies there until you finish the level. For this reason, I find it difficult to recommend the game to young players, as the graphics are quite realistic. Fortunately though, the levels of realism and gore aren't up there with Doom, so it's unlikely that you'll confuse reality with fantasy.

Conclusions

Wolfenstein 3D is an excellent game, with plenty of life in it – when you've finished the supplied levels, you can download extra ones from bulletin boards or Internet ftp sites. The violence makes it unsuitable for younger children, but for everyone else, the game is fun and exciting. Only the price is a little off-putting – £29.95 + p&p (£29 inclusive through Archive) – at a time when lots of excellent titles are appearing.

However, if you can afford the price tag, you'll get a lot of fun from this superb conversion. ♦

CASA-II and CASA-III

Richard Fallas

CASA from W.C.Smith & Associates is a Structural Frame Analysis application, which was first released some years ago. W.C.Smith and Associates (formerly Vision 6) have now released CASA-II. They have also provided for review a pre-release version of their new three-dimensional package, CASA-III. These programs are currently marketed in two versions: an entry level version of CASA-II, and a full version of CASA-II packaged with the entry-level version of CASA-III which is a completely new application for three-dimensional frames. Prices are £400 and £800 plus VAT respectively.

This review has been in gestation for some months: waiting first of all for time on my part, then the latest documentation, followed by much trying out and discussing foibles of the 3-D package, etc, etc. In the middle of all this, I have agreed to go and work in New Zealand for a few years... and of course there was Christmas! However, I now feel I can comment on both packages, consistent with their current state of development.

I reviewed CASA in Archive some years ago (Archive 4.8 p27) and later briefly reported on various enhancements (Archive 6.9 p48), since which time many new members of Archive will have arrived. CASA-II warrants further mention as it has now been polished to a commendable degree. Although clearly representing a minority interest, it adds to the RISC OS platform's armoury of quality software. Its main application will be by engineers and students wishing to know what forces and displacements will arise when a structural frame or grid is loaded. For anyone requiring such a facility, a program such as CASA-II will be as indispensable as a word processor.

I have used CASA in my professional practice for several years, and frankly would be at a loss without it. It ranks second only to PipeDream3 as the most used program on my machine (except perhaps Keystroke!) and, to date, its output has never been faulted by either Local Authorities or other checking Engineers. Obviously, therefore, it works! The screen shot opposite of a typical portal frame is included, in lieu of a thousand words! This shows

the frame after analysis with several relevant windows open, including the Member Forces output window.

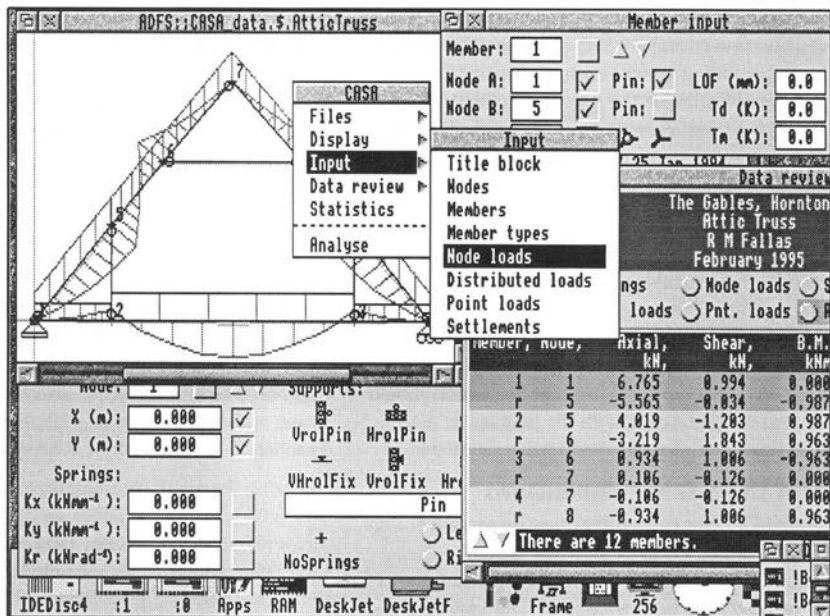
Two dimensions

CASA-II retains the split application approach to enable its use on 1Mb machines; editing the frame, members and loads is done within the front-end application, while the appropriate analysis

application handles the computation of either a 2-D frame (or truss), or a 2-D grid with loads normal to the plane of the members. The front end has been visibly enhanced in many ways, such that the options for adding and manipulating nodes, members, and indeed sub-structures, are now more capable than my needs require.

It is possible to create a simple portal frame, for example, using just five nodes and four members. These members can then be split with ease into shorter members by specifying either the fraction, distance, number of sections, etc. Node geometry is thus sensibly handled by the computer. Similarly, loads can be replicated by clicking on existing entries. Nodal entry may be by coordinates, clicking on other nodes to copy X or Y values, or by array. All of these apply to both frames and grids.

Member type selection has always been assisted by data files of hot-rolled steel sections. The user may now add to these using ASCII files, in my case created using PipeDream. For example, timber or concrete member sizes and moduli may be tabulated and stored in the appropriate directory. They will be loaded automatically on startup.



Several loadcases may be created with differing load factors for each. These are applied during analysis with output being available for each, individually or in combination. Some care is required to plan loadcases to simplify data entry, yet retain clarity of the final output for checking.

CASA-II will carry out a second (or more) pass during analysis if required in which the deflected shape from the previous pass is used as the starting point for the next. Most structures converge quickly, i.e. results do not differ greatly between say second and third passes, but some may tend to diverge – a potentially disastrous condition which, as far as I am aware, cannot be automatically checked by any other analysis software.

Other enhancements include a new manual, which includes a full worked example showing data input and results after analysis. More scaling and redrawing options are available, and output to PlotMate and HPGL plotters is now possible. Normal output is via RISC OS printer drivers. Full renumbering, transformation/mirror, etc facilities are now available and there is a bandwidth reducer to improve analysis speed.

A stability check can now be specified which applies a proportion (usually 1.5%) of the applied vertical loads (including gravity loading, if active), as a horizontal loading at the appropriate level, in accordance with current practice. Applied loads and reactions are summed and compared – essential for checking.

The analysis routines are now much faster (up to 500%). Detailed results for points along each member are available so that intermediate nodes are not required. Zooming of the display, as in Draw, is now possible. Analysis can now occur in the background if required. Many, many more detailed improvements are listed in a text file, which should be read in conjunction with the manual, as there may be new, undocumented features available.

And so to three dimensions

Why 3-D? This is a harder question to answer than it might seem. Virtually all of my design requirements are for 3-D structures, so how can a 2-D package have been adequate? The answer is that there is generally a core 'bit' of the structure which is not easy to resolve statically (i.e. with just a few equations, although w12/8 gets you a long way!).

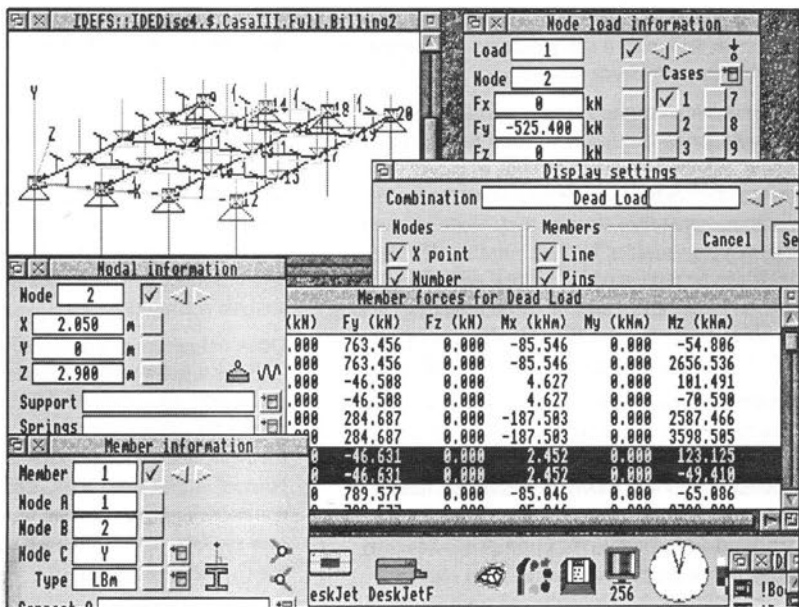
These bits are soluble using 2-D analysis, and the effect of, and on, the other parts can be predicted with reasonable confidence. The virtue of this is simplicity.

No one wants to pay a designer more than the absolute minimum to justify their valuable structure – cheque book engineering is the name of the game in Britain these days. Also, it is important to check that the analysis reflects reality. Hence, it is vital that the

analysis be kept as simple as possible, even if simplification may involve a few extra kilos of steel, timber or concrete, etc. Materials are reckoned by clients to be cheap (often this is totally incorrect!) – whereas engineering is seen as wasted expenditure. I wish it were not so, but that's the way things are heading.

A 2-D package used to analyse a simplified structure is quick and repetitive. There are cases, however, where this is just not close enough to the reality for confidence in the answers; or, alternatively, the benefits from full consideration are likely to be worthwhile. It would be nice, therefore, if one's favourite analysis program also covered the 3-D case, without being unduly laborious to use for the simpler 2-D stuff. Enter CASA-III, to fanfare...

Booting the application installs a "wee-house" on the icon bar, and the initial window contains X/Y/Z axes references on a white background. Reference to the main menu reveals a simple but much needed change – Save via F3 is implemented (although not on the latest CASA-II). Menu item "View" permits control of viewpoints, scales, printing, etc. Entry of title info, nodes, members, sections, loads, etc is made within various windows accessed via the



"Entry" menu item. The node-load-only restriction of the entry version may seem a serious limitation. I suspect, however, that much can be achieved

perfectly well using this, and I often simplify my analyses to just such an arrangement. For one thing, it is easier to check that the correct loads have been entered and that they tally with the reactions after analysis. (More of the dreadfully named KISS syndrome!) The remaining two menu items lead to Analysis and Results

respectively. It is also worth noting here that the full and entry versions both fitted onto a single 800Kb disk – this is unheard of in PC-land!

I understand that CASA-II is more-or-less the end of the line in terms of development of the 2-D application. The full 3-D package is currently being finalised but, in its current form, it is usable. Although a little rough in places, it shows great promise. As the advert in Archive 8.1 p22 indicates, the 3-D entry level application is provided free with the full version of CASA-II. I wanted to see if it would be viable within a busy office, on tight budgets, to use one program for all situations, i.e. 2-D and 3-D frames. The answer is that the 3-D program *can* be used for 2-D work, but I have yet to be convinced that it would be cost-effective. Perhaps familiarity, and further work on the front-end, will change this. Here I should say that engineering users of RISC OS machines are in a fortunate position in so far as access to software houses is concerned. W.C.Smith & Associates, like many others in the Acorn orbit, are very responsive to suggestions, and you can be sure that valid comment will be considered and, where possible, acted on.

CASA-III is different from CASA-II in that it comes as a single application. Much of the flavour of CASA-II is retained, but virtually every aspect of the front end has been changed – not always for the better in my view. The second partial screenshot shows some of the different input windows. I think a little further thought is required as to the best combination of menu structure, default window size, etc. I also suspect that the Acorn official style guide is partly responsible for some of the less convincing changes!

CASA-II adds to the RISC OS platform's armoury of quality software.

Be in no doubt: three dimensional analysis is no easy matter. Nor is the discipline required for conceiving and entering the model by the user. It becomes vital to be absolutely clear which axis must be referred to for each part of the process. My first attempt at entering a skewed bridge deck had it standing vertically in the air! What is more, it wasn't absolutely obvious that it was, and I even managed to get some 'results' from the analysis. To be fair, this was operator ignorance.

One of the extremely clever aspects of CASA-III is the perspective transformations used for graphical output. Time has not permitted a full bench-testing of the application against other packages (in the PC world). This will happen in due course – I expect to be able to do this in my new office in Auckland – and I will advise further when it is done.

Summarising the contrasts between CASA-II and CASA-III (full version) may be useful:

- ◆ Combined editing and analysis in one application
- ◆ Background printing has been implemented
- ◆ Analysis results may all be seen together
- ◆ Point to a member: the appropriate row in the results is highlighted
- ◆ Restraints are now user defined: change the definition, they all change
- ◆ Virtual memory is used i.e. via hard disk: this has speed implications but gives access to much bigger frames
- ◆ <Shift-adjust> can be used to zoom into the structure
- ◆ Display position settings can be edited
- ◆ Data entries are carried over when the option box is NOT highlighted – yuck!
- ◆ <F3> now opens a file save dialogue box

Several features are of more general note and indicate the way forward for RISC OS-based programs, although I understand that full Acorn support cannot be taken for granted. In particular, the use of virtual memory is a PC-type approach, which is new in my experience of RISC OS machines. I have not, however, had much opportunity to test it out by analysing a suitably

large frame. Background printing also works well and is a timely inclusion. Very few RISC OS programs have an UNDO feature, and CASA-III also lacks this. I believe it is essential that UNDO becomes a universally available feature to allow confident experimentation with ever more complex applications. I wish Colton had included it in FireWorkz! Minerva's ProCAD is almost unique in having the magic button to undo mistakes.

Conclusions

As I typed this review, a further update of CASA-III arrived, together with some much needed extracts from the manual, giving tutorial information. I have to stop somewhere in order to get this off to the editor, but suffice it to say that I am convinced that CASA-III will continue to be refined and improved, and potential users should be encouraged by this.

I am not yet convinced that a 3-D package can be suitable for all 2-D and 3-D frames, but it is certainly a good target. An intermediate step might be to have a common file structure for both, i.e. 2-D files can be recognised as such and read into

CASA-III. I believe that W.C.Smith and Associates are intending to accomplish this via a separate utility – which would suffice.

As to availability, CASA-II is firmly a reality. CASA-III is usable but not yet fully tested and polished, but with the latest version (2.12), it is very close. Demonstration disks can be obtained from W.C.Smith & Associates on 01665-510682.

Vital Statistics

Entry Level 2-D: will run in a 2Mb machine; limited to 32 nodes and members;

Full Version 2-D: will run in a 2Mb machine but structure size limited only by memory;

Entry Level 3-D: will work on a 2Mb machine (800Kb free Min); up to 50 nodes, 50 members, 50 node loads etc; 12 load and 12 settlement cases, 64 case combinations;

Full Version 3-D: 1Mb free memory + Hard disk absolute minimum, 2Mb free memory is recommended; structure size is limited only by available memory. ♦

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